Nairobi Municipality
Kenya.

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SIXTEENTH
ANNUAL REPORT
of the
Medical Officer of Health

—::—

1945

E.A. Standard, Ltd.—3313.

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TOWN HALL,
NAIROBI,
August 10th, 1946.

The Worshipful the Mayor, Aldermen and Councillors,
Municipal Council of Nairobi.

Your Worship, Aldermen, and Councillors,

I have the honour to present to you my Annual Report on the sanitary circumstances, sanitary administration, vital statistics and other matters of a health nature, of the Municipality of Nairobi for the year 1945, as required by the "Local Government (Municipalities) Ordinance, 1928," "The Medical Officers of Health Rules, Section 2 (12)d."

A. T. G. THOMAS,
Medical Officer of Health.

1. GEOGRAPHICAL.

Nairobi, the capital of Kenya, is situated in the highlands about 250 miles from the coast and is 330 miles by rail from the port of Mombasa, and 257 miles by rail from Kisumu on Lake Victoria.

The geographical position is :—

Latitude: 1° 16′ 43″ South.
Longitude: 36° 50′ East.

Height above sea level: From 5,452 feet to 5,700 feet.

Area of Municipality: 20,544 acres or 32.1 square miles.

2. METEOROLOGY.

The following meteorological observations were made by the B. E. A. Meteorological Service. The observations relating to temperature and humidity were taken near the Railway Offices at 5,495 feet.

MONTH:	ATMOSPHERIC PRESSURE CORRECTED: 8.30	TEMPERATURE: Dry Bulb. 14.30	Dew Pt. 8.30	Dew Point. 14.30	RAINFALL INCHES.	NO. OF DAYS' RAIN.	AV. 38 yrs HILL STATION	AV. DAYS' RAIN 38 YEARS.
		F.	F.	F.	F.				
JANUARY ...	24.225	65.5	79.2	56.7	54.5	1.85	5	1.40	5
FEBRUARY ...	24.190	66.2	82.8	55.8	50.7	2.09	4	2.23	5
MARCH ...	24.258	65.1	79.3	57.6	53.6	2.72	6	4.90	10
APRIL ...	24.246	65.1	80.7	59.9	54.1	1.07	7	7.93	17
MAY ...	24.255	63.5	74.1	59.2	60.4	9.06	22	5.11	15
JUNE ...	24.290	60.4	74.0	55.8	58.1	2.53	8	1.80	8
JULY ...	24.305	57.7	71.6	53.8	56.5	0.99	5	0.63	5
AUGUST ...	24.293	58.4	72.0	54.9	57.6	1.25	4	0.93	6
SEPTEMBER ...	24.296	60.0	75.0	54.5	55.2	0.64	4	1.07	5
OCTOBER ...	24.249	64.4	81.1	56.8	54.1	0.01	1	1.93	7
NOVEMBER ...	24.234	63.3	75.3	59.4	57.4	6.27	18	4.43	14
DECEMBER ...	24.240	65.2	77.9	56.3	54.3	0.57	4	2.74	10
YEAR ...	24.257	62.9	76.9	56.7	57.7	29.05	88	35.10	107

SEASONAL RAINFALL—HILL STATION:

SEASONS	1945	Av. 38 years:
Short Dry Season (Jan. to Feb.)	3.39	3.63
Long Rains (March to May)	13.87	17.94
Long Dry Season (June to Sept.)	6.00	4.43
Short Rains (October to Dec.)	6.64	9.10
ANNUAL:	29.90	35.10

3. VITAL STATISTICS.

The following tables give the main vital statistics for the year 1945:—

	Estimated Population	Deaths.	Death Rate.	Live Births.	Birth Rate.	Infant Deaths	Infant Mortality Rate.
Europeans	10,257	77	7.50	210	20.47	7	33.33
Indians	32,875	203	6.17	1343	40.85	81	60.31
Goans	3,642	12	3.29	142	38.98	2	14.08
Africans	63,739	604	9.47	1220	19.14	157	128.68
Seychellois	807	14	17.34	9	11.15	3	333.33
Arabs	794	8	10.07	8	10.07	3	375.00
Somalis	360	2	5.55	2	5.55	—	—
Others	340	4	11.76	4	11.76	—	—
ALL RACES:	112,814	924	8.19	2938	26.04	253	86.11

POPULATION:		DEATH RATE:
10,257	Epropean	7.50
36,517	Asian	5.88
66,040	African & Others	9.56
112,814	ALL RACES	8.19

POPULATION:

RACE:	1941	1942	1943	1944	1945
European ...	8,000	8,591	9,421	10,431	10,257
Asian	22,000	28,530	30,829	31,877	36,517
African & Others	70,000	54,453	59,022	66,592	66,040
ALL RACES: ...	100,000	91,574	99,272	108,900	112,814

4. MARRIAGES.

The following marriages were celebrated in Nairobi during the year. The figures are not corrected for persons habitually resident in Nairobi. The figure for 1944 was 405.

British	249
Indians	1
Goans	18
Sechellois	5
Natives	2
Total ...	275

5. BIRTHS

Notification of births has been compulsory since the application of the "Nairobi Municipality (Notification of Births) By-laws" 1934.

The accompanying table gives details of births notified in Nairobi during 1945 :

The following tables give details of births for 1945:—

BIRTHS NOTIFIED—1945.

NATIONALITY	RESIDENT.			NON-RESIDENT.			TOTAL.		
		Births.			Births.			Births.	
	No.	Still.	Live.	No.	Still.	Live.	No.	Still.	Live.
EUROPEAN:—									
British	198	1	197	86	4	82	284	5	279
American	1	—	1	1	—	1	2	—	2
Russian	1	—	1	—	—	—	1	—	1
Norwegian	1	—	1	1	—	1	2	—	2
Danish	1	—	1	—	—	—	1	—	1
Czechoslovakian	3	—	3	—	—	—	3	—	3
Canadian	—	—	—	1	—	1	1	—	1
German	2	—	2	1	—	1	3	—	3
Chinese	1	—	1	—	—	—	1	—	1
Swiss	1	—	1	—	—	—	1	—	1
Austrian	1	—	1	—	—	—	1	—	1
Finnish	1	—	1	—	—	—	1	—	1
TOTAL	211	1	210	90	4	86	301	5	296
ASIAN:									
Indian	1,372	29	1,343	40	3	37	1,412	32	1,380
Goan	143	1	142	2	—	2	145	1	144
TOTAL	1,515	30	1,485	42	3	39	1,557	33	1,524
AFRICAN AND OTHERS:									
African	1,252	32	1,220	518	29	489	1,770	61	1,709
Somali	2	—	2	—	—	—	2	—	2
Arab	8	—	8	—	—	—	8	—	8
Nubian	2	—	2	1	—	1	3	—	3
Seychellois	10	1	9	1	—	1	11	1	10
Sudanese	1	—	1	—	—	—	1	—	1
Mauritian	1	—	1	—	—	—	1	—	1
TOTAL	1,276	33	1,243	520	29	491	1,796	62	1,734
GRAND TOTAL	3,002	64	2,938	652	36	616	3,654	100	3,554

NOTIFICATION OF RESIDENT BIRTHS.

RACE.	1941	1942	1943	1944	1945
1 European	152	186	196	249	211
2 Indian	444	731	840	1,129	1,372
3 Goan	89	101	98	123	143
4 African & Others	718	1,002	797	1,009	1,276
TOTAL	1,403	2,020	1,931	2,510	3,002

It will be noted that the total resident births notified has increased from 2,510 in 1944 to 3,002 in 1945, and the non-resident births have increased from 395 to 652 whilst the number of still-births was 64 against 63 ; the still-birth rate was, European 0.09, Asian 0.80 and African 0.40 whilst in 1944 the figures were 1.20, 2.04 and 3.17 respectively, a very satisfactory decrease in each instance.

BIRTH RATES.

RACE.	1944.	1945.	Increase or decrease.
European ...	23.58	20.47	—3.11
Indian ...	41.12	40.86	—0.26
Goan ...	36.37	38.98	+2.16
African & Others	14.67	18.88	+4.21
ALL RACES ...	23.12	26.04	+2.92

It will be noted that the European birth rate has diminished noticeably, whilst the African group has increased considerably, and the Asian races have also increased.

6. DEATHS.

Unless otherwise stated the following statistics refer to civilian residents of Nairobi, including the Prison and Mathari Hospital.

Figures have been calculated on the estimated population for 1945, and have been corrected for outward, but not for inward transfers.

The total number of deaths reported in Nairobi during the year was 1631.

The number of deaths from all causes among persons stated to be normally resident in Nairobi was 924, equivalent to a death rate for all races of 8.19 compared with 8.99 for 1944.

Of the 924 deaths among residents, 595 were males and 329 females. 253 or 27.3% of the deaths were of infants under one year of age.

77 deaths occurred among Europeans equivalent to a rate 7.50 per thousand of that race, compared with 5.94 last year.

215 deaths occurred among Asians, equivalent to a rate of 5.88 compared with 7.27 last year, and 632 deaths occurred among Africans and others equivalent to a rate of 9.56 compared with 10.73 in 1944.

DEATHS BY RACE & SEX

DEATHS 1945:

	European.	Indian.	Goan.	African.	Somali.	Seychellois	Arab.	Nubian.	Others.	TOTAL.
Resident Male ...	43	138	7	391	2	7	6	—	1	595
„ Female ...	34	65	5	213	—	7	2	1	2	329
TOTAL	77	203	12	604	2	14	8	1	3	924
Non-Resident Male	15	6	2	394	3	—	1	2	—	423
„ Female ...	10	2	—	271	—	—	—	1	—	284
TOTAL	25	8	2	665	3	—	1	3	—	707
TOTAL:	102	211	14	1269	5	14	9	4	3	1631

CAUSES OF DEATHS BY GROUPS AND RATE PER 1,000 PERSONS.

	European.	Asian.	African and others.	TOTAL	Percentage	Death Rate.
1. Infectious and Parasite Diseases ...	7	33	172	212	22.94	1.87
2. Cancer and other tumours ...	9	6	12	27	2.92	0.23
3. Rheumatism, Diseases of Nutrition, etc.	5	7	3	15	1.62	0.13
4. Diseases of the Blood, etc. ...	4	3	5	12	1.29	0.10
5. Poisoning	—	—	5	5	0.54	0.03
6. Diseases of the Nervous System ...	3	11	38	52	5.62	0.46
7. Diseases of the Circulatory System	17	19	13	49	5.30	0.43
8. Diseases of the Respiratory System	3	33	129	165	17.85	1.46
9. Diseases of the Digestive System	13	16	52	81	8.76	0.71
10. Non-Venereal disease of the genito-urinary system	6	10	15	31	3.35	0.27
11. Diseases of pregnancy, child-birth and the puerperal state ...	—	4	14	18	1.94	0.15
12. Diseases of the Skin	1	—	1	2	0.21	0.01
13. Diseases of the Bones and Joints ...	—	—	2	2	0.21	0.01
14. Congenital malformations ...	1	1	4	6	0.64	0.05
15. Diseases of Early Infancy ...	3	45	78	126	13.63	1.11
16. Old Age	—	—	5	5	0.54	1.04
17. Deaths from Violence	2	16	51	69	7.46	0.61
18. Ill-defined Diseases...	3	11	33	47	5.08	0.41
TOTAL:	77	215	632	924	100.00	8.19

INTERNATIONAL NOMENCLATURE:

	EUROPEAN:	INDIAN:	AFRICAN & OTHERS:	TOTAL.
GROUP I: INFECTIOUS & PARASITIC DISEASES:				
1. Typhoid Fever	2	—	14	16
4. Relapsing Fever	—	—	1	1
9. Whooping Cough	—	—	12	12
10. Diphtheria	—	2	—	2
13. Dysentery	—	5	14	19
17. Encephalitis Lethargica	1	2	5	8
18. Cerebrospinal Fever	—	—	2	2
22. Tetanus	—	1	10	11
23. Tuberculosis (Lungs)	1	13	40	54
24. Tuberculosis (other organs)	—	1	8	9
27. Measles	—	1	6	7
34. Syphilis	—	1	29	30
36. Septicaemia	—	2	17	19
38. Malaria	2	4	13	19
41. Hydatid Mole	—	1	—	1
42. Bilharzia	—	—	1	1
44. Mumps	1	—	—	1
TOTAL:	7	33	172	212
GROUP II: CANCER & OTHER TUMOURS:				
45. Tongue	—	—	1	1
45. Tonsils	—	—	1	1
46. Pancreas	—	1	1	2
Oesophagus	—	1	—	1
Stomach	1	—	—	1
Rectum	1	1	—	2
Liver	2	1	—	3
Retro-Peritoneal	—	1	—	1
48. Uterus	3	1	—	4
50. Breast	—	—	3	3
51. Prostate	1	—	—	1
53. Unspecified	—	—	2	2
General	—	—	1	1
54. Uterine Fibroid	—	—	3	3
66. Goitre	1	—	—	1
TOTAL:	9	6	12	27
GROUP III: RHEUMATISM, DISEASES OF NUTRITION, ETC.:				
56. Rheumatic Fever	—	—	1	1
59. Diabetes	5	5	2	12
63. Rickets	—	2	—	2
TOTAL:	5	7	3	15
GROUP IV: DISEASES OF THE BLOOD, ETC.:				
71. Anaemia	1	3	3	7
72. Loukaemia	2	—	2	4
Agranulocytosis	1	—	—	1
TOTAL:	4	3	5	12

	EUROPEAN:	INDIAN:	AFRICAN & OTHERS:	TOTAL.
GROUP V: POISONING:				
Alcoholism	—	—	2	2
Poisoning (meth. spirits) ...	—	—	2	2
Poisoning (paraffin)	—	—	1	1
TOTAL:	—	—	5	5
GROUP VI: DISEASES OF THE NERVOUS SYSTEM:				
79. Meningitis	—	4	9	13
81. Myelitis	—	1	—	1
82. Cerebral Haemorrhage	3	5	11	19
84. Insanity	—	—	13	13
85. Epilepsy	—	—	2	2
86. Convulsions (infantile)	—	—	1	1
87. Convulsions (hysterical)	—	1	—	1
87. Chorea	—	—	2	2
TOTAL:	3	11	38	52
GROUP VII: DISEASES OF THE CIRCULATORY SYSTEM:				
94. Angina pectoris	—	1	1	2
95. Heart Disease	15	15	12	42
96. Aneurysm	1	1	—	2
102. Hyperpiesis	1	2	—	3
TOTAL:	17	19	13	49
GROUP VIII: DISEASES OF THE RESPIRATORY SYSTEM:				
106. Bronchitis	—	2	—	2
107. Broncho-pneumonia	—	11	52	63
108. Lobar pneumonia	2	16	74	92
110. Pleurisy	—	—	1	1
110. Empyema	—	—	1	1
111. Oedema of the lung	—	—	1	1
112. Asthma	1	4	—	5
TOTAL:	3	33	129	165
GROUP IX:				
73. Ruptured Spleen	—	—	2	2
115. Ludwig's angina	—	—	1	1
Tonsilitis ...	—	—	1	1
117. Gastric ulcer	2	1	—	3
118. Haematemesis	—	—	1	1
118. Hepatitis	—	—	4	4
119. Diarrhoea	3	11	25	39
121. Appendicitis	2	1	1	4
122. Hernia	—	—	1	1
Intestinal obstruction	1	2	8	11
123. Intestinal Haemorrhage	—	—	1	1
124. Cirrhosis of liver	2	—	1	3
126. Cholelithiasis	1	—	—	1
128. Pancreatitis	1	—	—	1
129. Peritonitis	1	1	6	8
TOTAL:	13	16	52	81

GROUP X: NON-VENEREAL DISEASES OF GENITO-URINARY SYSTEM:				
35. Urethral structure	—	—	1	1
130. Nephritis	5	10	13	28
135. Vesico-vaginal fistula	—	—	1	1
137. Enlarged Prostate	1	—	—	1
TOTAL:	6	10	15	31
GROUP XI: DISEASES OF PREGNANCY, CHILD-BIRTH & PUERPERAL STATE:				
141. Abortion	—	—	2	2
142. Ectopic gestation	—	—	1	1
145. Puerperal sepsis	—	1	1	2
147. Toxaemia of pregnancy	—	—	1	1
148. Puerperal embolism	—	—	1	1
149. Difficult labour	—	—	2	2
160. Birth injuries ...	—	3	6	9
TOTAL:	—	4	14	18
GROUP XII: DISEASES OF THE SKIN:				
153. Exfoliative Dermatitis	—	—	1	1
153. Ulcerative Dermatitis	1	—	—	1
TOTAL:	1	—	1	2
GROUP XIII: DISEASES OF THE BONES & JOINTS:				
154. Osteo-myelitis	—	—	1	1
155. Periostitis	—	—	1	1
TOTAL:	—	—	2	2
GROUP XIV: CONGENITAL MALFORMATIONS: ...				
157. Malformations (unspecified) ...	1	1	4	6
TOTAL:	1	1	4	6
GROUP XV: DISEASES OF EARLY INFANCY:				
63. Rickets	—	2	—	2
158. Marasmus	—	23	51	74
159. Prematurity	2	18	23	43
161. Asphyxia Neonatorum ...	1	1	4	6
161. Pemphigus Neonatorum	—	1	—	1
TOTAL:	3	45	78	126
GROUP XVI: OLD AGE:				
162. Senility	—	—	5	5
TOTAL:	—	—	5	5
GROUP XVII: DEATHS FROM VIOLENCE:				
171. Suicide	—	—	1	1
175. Homicide ...	—	—	3	3
181. Burns	—	5	5	10
193. Electric shock	—	—	1	1
194. Accident (unspecified)	2	11	22	35
182. Asphyxia	—	—	1	1
198. Legal execution	—	—	18	18
TOTAL:	2	16	51	69

GROUP XVIII: ILL-DEFINED DISEASES:				
200. Heart failure	1	3	5	9
Natural causes	1	5	18	24
Asthenia	—	3	—	3
Unknown	1	—	10	11
TOTAL:	3	11	33	47.

GROUP 1. *Infectious and Parasitic Diseases* still account for the largest number of deaths. but the total, percentage, (roughly one quarter) and death rate, are gratifyingly lower than they have been since 1940.

Of the individual causes of death typhoid fever declined from 35 in 1944 to 16, tuberculosis from 87 to 63, dysentery from 32 to 19, and malaria from 35 to 19, the number of cases of septicaemia was approximately the same as last year. No cases of plague or smallpox were recorded.

The death rate from typhoid fever has fallen from 0.32 in 1944 to 0.14 for the present year, tuberculosis from 0.79 to 0.55 the rates for malaria and dysentery are 0.16 in each case, a satisfactorily low figure.

GROUP 2. *Cancer and Other Tumours*: the deaths increased from 18 to 27, of these 9 occurred in Europeans, 6 in Asians, and 12 in Africans. The death rate rose from 0.16 to 0.23 ; the rate for cancer alone was 0.21.

GROUP 3. *Rheumatism and Diseases of Nutrition*: numbered 15 as against 14 in 1944, the death rate was 0.13 compared with 0.12. No cases of infantile oedema or pellagra were recorded.

GROUP 4. *Diseases of the Blood*: the deaths noted numbered 12 compared with 15 in 1944, anaemia being the most frequent cause of mortality; the death rate was 0.10.

GROUP 5. *Poisoning*: occurred in 5 cases, 4 of which were from alcohol and methylated spirits.

GROUP 6. *Diseases of the Nervous System*: accounted for 52 deaths as against 27 in 1944 ; cerebral haemorrhage was responsible for 19 deaths, meningitis and insanity for 13 each. The death rate was 0.46 compared with 0.24 in 1944.

GROUP 7. *Diseases of the Circulatory System*: this group was responsible for 49 deaths, an increase of 10 on each of the previous 2 years ; heart disease in various forms was fairly equally responsible for the mortality occurring in the three races; a slightly higher incidence amongst Asians being noted than of either of the two other main race groups. The death rate was 0.43 compared with 0.35 in 1944.

GROUP 8 *Diseases of the Respiratory System*: this still maintains its position as the second largest group in the list of causes of deaths, although it is satisfactory to note that the total number of deaths recorded has fallen from 245 in 1941 to 165 in the year under review. The pneumonias form the most prominent feature of this group; below are given the number of cases and mortality rates for the previous three years.

	TOTAL CASES:			DEATH RATES:		
	1943	1944	1945	1943	1944	1945
Broncho pneumonia	45	66	53 ...	0.45	0.66	0.47
Lobar pneumonia	90	101	100 ...	0.90	0.93	0.88
TOTAL: ...	135	167	153 ...	1.35	1.53	1.35

The deaths from pneumonia, with the exception of two, occurred amongst Asians and Africans.

GROUP 9. *Diseases of the Digestive System*: the number of deaths in this group is 81 compared to 89 in 1944, and 93 in 1943. Deaths from diarrhoea in children under 2 years have fallen from 45 in 1944 and 49 in 1943 to 24 in the present year. The death rate from this disease has fallen steadily since 1942 as shown below.

	1942	1943	1944	1945
Death rates: Diarrhoea (under 2 years) ...	0.65	0.50	0.41	0.21

GROUP 10. *Non-Venereal Diseases of Genito-Urinary System*: the number of deaths from diseases in this group remains fairly constant; nephritis is the most prominent disease in the group, accounting this year for 28 out of a total of 31 deaths.

GROUP 11. *Diseases of Pregnancy and the Puerperal State*: the deaths under this group occurred from a variety of causes connected with childbirth and the puerpearal state; it is noteworthy that 14 out of the 18 cases recorded were amongst Africans; there were no deaths amongst Europeans.

GROUPS 12, 13, & 14 call for no mention.

GROUP 15. *Diseases of Early Infancy*: The total number of deaths in this group is 126 compared to 128 during 1944. Deaths from congenital debility and prematurity were 117 compared with a similar number in 1944, and 105 in 1943, the former rose from 45 to 74 but the latter declined from 72 to 43. Asphyxia accounted for 6 deaths. European deaths in this group declined by 5, Indian deaths numbered 45 compared with 46 in 1944, whilst African deaths totalled 78 compared to 74.

The death rate was 1.11 against 1.17 in 1944, the number of deaths in this group corresponding to 49.8% of the total infant deaths.

GROUP 17. *Deaths from Violence*: the number of deaths from this cause declined from 90 to 69 due mainly to a reduction in accidents classified as "unspecified," but chiefly due to road accidents; there were 18 legal executions during the year as against 9 during 1944, all were Africans.

GROUP 18: *Ill Defined Diseases*: this group is slightly less than those recorded during the previous year 47-54; 10 of the number referred to bodies of Africans discovered by the police, where, in their opinion no foul play was suspected, and it was considered unnecessary to hold a postmortem examination, but the remainder refer to certificates of death received from practitioners where the cause of death was stated with insufficient accuracy; the lack of exactness in certification is much to be regretted.

The highest causes of death shown below, in numerically decreasing importance, in the three race groups were :—

EUROPEAN.	ASIAN.	AFRICAN.
Dis. of the Circulatory system.	Dis. of Early Infancy.	Infectious and Parasitic diseases.
Dis. of the Digestive system.	Dis. of the Respiratory system.	Dis. of the Respiratory system.
Cancer & Other Tumours	Infectious & Parasitic diseases.	Dis. of Early Infancy.
Infectious and Parasitic diseases.	Dis. of the Circulatory system.	Dis. of the Digestive system.
Non-Veneral disease of the genito-urinary syst.	Death from Violence.	Death from Violence.

INFANT MORTALITY

The infant mortality rate for all races as expressed by the number of deaths of infants under one year of age per 1,000 live births was 86.11 for the year. This is even more satisfactory than that for 1944, and 1943 namely 135 and 97; a low infant mortality rate is a sure index both of the sanitary condition of the town, and the degree of enlightenment of the population; it is gratifying to note that the Asian rate has declined progressively during the seven years 1939-1945 from 174 to 56, and that the African rate has during the same period, in spite of two sharp rises, declined from 217 to 131. The number of infant deaths was 253 or 27.3% of the total deaths. Corresponding figures for 1944 were 244 or 24.9%. Despite the notable improvement mentioned above, a great deal still remains to be done in the way of infant welfare and maternal education, but it is satisfactory to feel that these Departments of the Public Health organisation are playing a great part in combating ignorance and faulty methods in the rearing of infants.

INFANT MORTALITY RATES:

Race	Live Births	Infant Deaths	Rate/1000 Live Births
European	210	7	33.33
Asian	1485	83	55.89
African & Others	1243	163	131.13
ALL RACES	2938	253	86.11

COMPARISON INFANT MORTALITY RATES FOR SEVEN YEARS:

Year	European	Asian	African & Others	All Races
1939	35	174	217	180
1940	56	174	248	187
1941	20	146	180	149
1942	33	127	165	137
1943	36	95	207	135
1944	49	62	154	97
1945	33	56	131	86

MATERNAL MORTALITY RATES:

Race	Live & Still Births.	Maternal Deaths.	Rate/1000 Births.
European	211	Nil	Nil
Asian	1515	1	0.66
African & Others	1276	8	6.26
All Races	3002	9	2.99

CAUSES OF INFANT DEATHS:

Disease	European.	Asian.	African & Others.	Total:
Asphyxia Neonatorum	1	1	4	6
Birth Injury	—	3	6	9
Bronchitis	—	1	—	1
Burns	—	3	—	3
Cerebral Haemorrhage	—	—	1	1
Congenital Malformation	1	—	2	3
Congenital Syphilis	—	—	24	24
Convulsions	—	—	1	1
Diarrhoea	1	9	9	19
Dysentery	—	—	1	1
Haemorrhage	—	—	4	4
Ill defined	—	—	1	1
Injury	—	1	—	1
Intestinal Obstruction	—	2	—	2

Malaria	...	...	...	...	...	—	...	—	...	4	...	4
Marasmus	...	...	...	...	...	1	...	23	...	43	...	67
Measles	...	...	...	...	...	—	...	1	...	—	...	1
Meningitis	...	...	...	...	...	—	...	—	...	2	...	2
Nephritis	...	...	...	...	...	—	...	1	...	—	...	1
Periostitis	...	...	...	...	...	—	...	—	...	1	...	1
Pemphigus Neonatorum	...	...				—	...	1	...	—	...	1
Pneumonia (Broncho)	...	...	...			—	...	8	...	19	...	27
Pneumonia (Lobar)	...	...	...			1	...	7	...	10	...	18
Prematurity	...	...	...	...	...	2	...	18	...	23	...	43
Rickets	...	...	...	...	...	—	...	2	...	—	...	2
Septicaemia	...	...	...	...	...	—	...	2	...	1	...	3
Tetanus	...	...	...	...	...	—	...	—	...	1	...	1
Tuberculosis	...	...	...	...	...	—	...	—	...	1	...	1
Whooping Cough	...	...	...	...		—	...	—	...	5	...	5
TOTAL:						7	...	83	...	163	...	253

MONTHLY TOTALS:

January	...	...	...	...	...	...	...	...	...	...	23
February	..	...	...	...	...	...	...	...	...	...	17
March	...	...	...	...	...	...	...	...	...	...	17
April	...	...	...	...	...	...	...	...	...	...	25
May	...	...	...	...	...	...	...	...	...	...	23
June	...	...	...	...	...	...	...	...	...	...	22
July	...	...	...	...	...	...	...	...	...	...	25
August	...	...	...	...	...	...	...	...	...	...	21
September	...	...	...	...	...	...	...	...	...	...	15
October	...	...	...	...	...	...	...	...	...	...	27
November	...	...	...	...	...	...	...	...	...	...	23
December	...	...	...	...	...	...	...	...	...	...	15
TOTAL:	...	...	...	...	...	...	...	...	...	...	253

The number of cases of congenital debility increased steeply from 34 or 13.9% in 1944 to 67 or 26.4%; the second place was held by the pneumonias with 45 or 17.7%; prematurity accounted for 43 deaths or 16.9% of the total, a considerable reduction from the numbers occurring in 1944 when 67 deaths were recorded forming 27.4% of the total. Syphilis occupied fourth place with 24 deaths or 9.4% and lastly, of the important causes of infant deaths, diarrhoea accounted for 19 or 7.5%.

The Asian rates for congenital debility, pneumonia, prematurity, and diarrhoea were 27.7% 18.0% 21.6% and 10.8% respectively, a considerable increase in each case on the combined percentages.

	January.	February.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	TOTAL:
Anthrax	—	—	—	—	—	—	1	—	—	—	1	2	4
Cerebrospinal meningitis	—	—	—	—	—	—	—	2	—	—	—	3	5
Diphtheria	2	1	3	—	1	—	1	—	2	2	2	—	14
Encephalitis lethargica	—	—	—	—	1	—	—	—	—	—	—	—	1
Leprosy	—	1	—	1	—	—	—	—	1	—	—	1	4
Malta Fever	—	—	1	—	—	—	—	—	1	—	—	1	3
Poliomyelitis	—	—	—	—	—	—	1	—	—	—	—	—	1
Puerperal sepsis ...	—	1	—	—	—	1	—	—	—	—	2	—	4
Relapsing fever	—	1	—	—	—	—	—	—	—	—	—	—	1
Smallpox	3	2	1	1	—	1	—	—	—	1	—	—	9
Tuberculosis	17	9	8	6	7	5	11	7	12	8	2	4	96
Typhoid fever													
Typhus	—	—	—	—	—	1	—	1	1	—	—	2	5
TOTAL:	42	31	22	17	25	15	27	23	23	18	11	18	272

NOTIFIABLE INFECTIOUS DISEASES:

The number of infectious diseases notified during the year was 582 compared with 1,461 during 1944, malaria accounted for 310 typhoid fever 125, and tuberculosis 96.

Excluding malaria, the remaining total of 310 is definitely less than that for 1944, namely 351. Typhoid fever remains practically as last year, but notifications of tuberculosis have fallen from 155 in 1944 to 96 during the present year: 14 cases of diphtheria were notified, 7 less than during 1944, the greatest number occurring amongst Asians, 4 cases of anthrax occurred in Africans, all of which recovered ; 5 of cerebrospinal meningitis, 2 of which were fatal, and 1 only of encephalitis lethargica, although 8 deaths from this disease were registered ; there was 1 case of poliomyelitis, and 4 of leprosy ; 3 cases of Malta fever were notified and one of relapsing fever ; there were 9 cases of smallpox, 1 Asian and 8 Africans, all of which were of a mild type.

Below is given a comparison between the various rates relating to tuberculosis, and typhoid fever, for the years 1944 and 1945 :—

TUBERCULOSIS :	Death Rate.	Incidence.	Case Mortality.
1944	0.79	1.42	56.1%
1945	0.55	0.85	65.6%
TYPHOID FEVER :			
1944	0.32	1.13	28.4%
1945	0.14	1.10	12.8%

The following vaccinations, and inoculations were performed during the year :—

Yellow Fever Inoculations	9,438
T. A. B. Inoculations	5.660
Diphtheria Immunisation	32
Smallpox Vaccinations	9,594
TOTAL	24,724

INFECTIOUS DISEASES NOTIFIED

	European.	Asian.	African & Others.	Total.	Case Mortality.
Anthrax	—	—	4	4	—
Cerebrospinal Meningitis	—	1	4	5	40.0%
Diphtheria	2	7	5	14	70.1%
Encephalitis	—	—	1	1	—
Poliomyelitis	—	1	—	1	—
Leprosy	—	1	3	4	—
Malta Fever	1	—	2	3	—
Puerperal Fever	2	1	1	4	50.0%
Relapsing Fever	—	—	1	1	100.0%
Smallpox	—	1	8	9	—
Tuberculosis	—	13	83	96	65.6%
Typhoid Fever	—	23	98	125	12.8%
Typhus Fever	2	—	3	5	—
TOTAL ...	11	48	213	272	—
Malaria	29	202	79	310	
	40	250	292	582	

COMMUNICABLE DISEASES AS AFFECTING RACES TREATED IN HOSPITAL DURING 1945:

	European:	Asian:	African & Others.	Total:
Acute Poliomyelitis	1	—	—	1
Anthrax	—	—	9	9
Chickenpox	—	1	181	182
Cerebrospinal meningitis	—	—	6	6
Diphtheria	—	3	4	7
Encephalomyelitis	1	—	—	1
Erysipelas	1	—	—	1
Leprosy	—	1	8	9
Malta Fever	1	—	4	5
Measles	1	1	151	153
Mumps	—	—	31	31
Smallpox	—	—	13	13
Tropical Typhus	1	—	7	8
Tuberculosis	—	2	78	80
Typhoid Fever	4	3	88	95
Whooping Cough	—	—	110	110
Contacts	3	1	102	106
TOTAL:	13	12	792	817

ADMISSIONS TO HOSPITAL:
ADMISSIONS TO HOSPITAL AND PATIENT DAYS:

Hospital	European: Admissions.	European: Patient days.	Asian: Admissions.	Asian: Patient days.	African & Others: Admissions.	African & Others: Patient days.	Total: Admissions.	Total: Patient days.
European ...	9	214	—	—	—	—	9	214
Native Civil	—	—	5	139	126	3540	131	3679
Infectious Diseases...	4	12	7	652	666	11702	677	12366
Total:	13	226	12	791	792	15242	817	16259

SANITARY ADMINISTRATION.

As shown by the summary of works performed, 1945 was comparable with the previous year. The full staff was employed until the last quarter of the year, when one inspector left on overseas leave.

During the period there was a fairly considerable loss of time owing to sickness. Possibly this was connected with the fact that most of the officers were overdue for leave, and it is hoped that it may be possible to arrange for adequate leave for the staff during the forthcoming year. This will depend upon the arrival of two new sanitary inspectors and a re-arrangement of duties.

In general, there has been little improvement in the difficulties caused by the war as they affect sanitary administration. Shortages of housing, of workshops and materials, and overcrowding, all related to the war, continued to provide many problems. It will not be until an extensive building programme has been carried out, and the grave overcrowding abated, that it will be possible to regard the circumstances of the town as really normal from the sanitary point of view.

As might be expected, the increasing rate of tuberculosis and venereal disease gives an indication that overcrowding and malnutrition are very serious problems. Nairobi, with its rapid growth, runs a risk of outgrowing its strength, and as the population increases, most vigorous efforts will be necessary to protect it from the dangers implicit in inadequate sanitation and overcrowding.

There could be much improvement in the amount of co-operation accorded by the general public to the sanitary staff. The former are often quick to complain, and look with disfavour on many of the unsightly dumps of material, and various kinds of litter which, unfortunately, are to be found in certain parts of the town. They do not perhaps realise the constant efforts which are being made to discourage untidiness, nor the fact that it is the public themselves who are responsible for the position.

It might be well to add that there could be a considerable strengthening of the legal powers of the Public Health Department in this connection by the improvement of the by-laws, which are not entirely adequate at present.

It is to be hoped that the growth of the town, as regards its streets and buildings, will be accompanied by an equal awakening of civic spirit.

SANITATION:
SUMMARY OF WORKS PERFORMED:

NUISANCES:

Inspections made to:—

Dwelling Houses	3181
Laundries	227
Offensive Trades	24
Stables and Cattle sheds	12
Trade premises and offices	4162
Public Buildings	287
Open spaces, streets, etc.	2053
Complaints investigated	225
House to House inspections	933
Premises surveyed	119
	10423

DEFECTS REMEDIED:

Premises dirty or verminous	522
Dwellings unfit for habitation (including native huts)	44
Yards unpaved	10
Rat infested premises	38
Latrine accommodation defective or inadequate	164
Drains (pipe) choked or defective	128
Drains (open) choked or defective	93
Drains absent or inadequate	8
Septic tanks or pits choked or defective	86
Waste water disposal defective or inadequate	64
Accumulations of refuse	451
Food unprotected against rats	59
Sleeping in kitchens or foodstores	17
Mosquito breeding	292
Overgrown plots	40
Miscellaneous	497
	2513

DEFECTS REMEDIED FOLLOWING:

Verbal Intimation	1299
Written "	636
Statutory Notices	578

LICENCES:

Trade premises inspected and re-inspected	1592
Taxi cab Inspections	105
Food Carts: Milk-Meat-Bread-Sweatmeats	159

ERECTION & ALTERATION OF BUILDINGS:

Plans scrutinised	633
Inspections made	1325
Completion certificates issued	287

INFECTIOUS DISEASES:

Inspections made	158
Cases investigated	121
Rooms with contents disinfected	66
Rats destroyed	16,981

NOTICES SERVED:

Intimation	506
Public Health Ordinance (Nuisance)	215
Public Health Ordinance (Others)	13
Rats and Mice Rules	19

BY-LAWS:

Drainage By-laws	227
Mosquito Control	180
By-law 268	3
„ 465	4
„ 499	7
„ 508	3
„ 509	6
„ 510	16
„ 513	12
„ 517	4
„ 518	8
„ 566	1
	471

PROSECUTIONS:

Public Health Ordinance Fines & Costs	210/-
Rats & Mice Destruction Rules „ „	210/-
By-laws ... ... „ „	620/-
Food and Drugs and Milk and Dairies Rules...	1232/-
	Shs. 2272/-

INSPECTIONS OF PREMISES SUBJECT TO SPECIAL CONTROL:

Premises:	No. of Inspections.
Aerated water factories	176
Bakeries	197
Butchers	712
Dairies and Milk shops	707
Eating Houses	1203
Fishmongers	277
Food Factories	412
Groceries and Provisions	1055
Hotels and Bars	183
Markets	123
Restaurants and Tea Rooms	464
Vegetable Sellers	1013
	6522

INSPECTION AND SUPERVISION OF FOOD AND FOOD PREMISES.

Of the five Aerated Water Factories one is owned by a European and four by Asians.

There are 17 dairies and milk shops in Nairobi. Only three of these produce milk within the Municipal area. Of the remaining 14 milk dairies 2 are operated by Europeans, 7 by Asians 1 by a Somali and 4 by the Municipality in the locations.

During the year, 253 samples of milk were purchased against 324 the previous year. These samples were analysed by the Government Chemist. A great reduction was observed in the adulteration of milk. The previous year 1944, 80 samples were found not to be genuine, whilst this year only 17 were found adulterated.

There were four prosecutions this year against 47 during 1944; this points to the fact that frequent sampling has had a beneficial result on the quality of milk retailed. Fines imposed this year for the four prosecutions amounted to 1,190/- and 42/- costs, and for the 33 prosecutions undertaken during 1944 the corresponding amounts were 1,660/- and 417/- costs.

A number of informal samples of food stuffs were taken during the year, and were found to be of an indifferent standard in the majority of cases. The Public Health (Manufacture, Preparation Packing and Repacking of Food) Rules 1944 came into force on the 1st January, 1945.

In many cases existing food premises fell short of the requirements of these Rules, but licences were issued due to the fact that materials for effecting the necessary improvements could not be obtained. It was considered that some relaxation should be granted and a period of 3 months was suggested to enable the premises to be brought up to a reasonable standard.

If clean milk is to be obtained it is of great importance that the proposed processing depot should be built, staffed, and brought into operation as early as possible and the necessary By-laws framed, and put into practice. The present conditions under which milk is produced and handled are far from satisfactory. When by-laws to this effect are formulated, it should be made an offence to break the seals and to empty milk from one vessel or container to another except on licensed premises.

SAMPLING:

	No. of Samples.	Analysed.	Unfit for Analysis.	Genuine.	Not Genuine.	Doubt-ful.	No Report.
Water	7	—	—	6	—	1	—
Milk	253	253	7	198	17	—	31
Posho	1	1	—	1	—	—	—
Vinegar	1	1	—	1	—	—	—
Mixed Rice	1	1	—	1	—	—	—
Beer	1	—	1	—	—	—	—
Pepper	1	1	—	—	1	—	—
Magnesia	1	1	—	1	—	—	—
Lemon Squash	1	1	—	1	—	—	—

UNSOUND FOODS:

"	Inspected Lbs.	Condemned Lbs.
Fish	39560 ...	—
Fruit	75670 ...	75
Groceries and Provisions	330566 ...	14619
Meat	293450 ...	7
Vegetables	111830 ...	—
Tinned Foods	10828 ...	217
Bottled Foods	10686 ...	1293
TOTAL:	872590 ...	16211
Mineral Water	3591 Bottles ...	334 Bottles
Milk	7201 Gallons ...	523 Gallons

SEWERAGE AND DRAINAGE

The progress made in the construction of sewers during the year was most commendable, for despite various retarding influences which have operated for the past few years, 31,425 running feet of sewer were laid or constructed.

The item accounting for the greatest length was that known as the "Zone B" sewer, with 11,540 running feet.

A total length of 27,980 feet of 9" sewer was laid, whilst 3,185 feet of cement concrete sewers of larger sizes were constructed: 260 feet of 6" pipes were laid.

The actual construction of these sewers was carried out by the Municipal Engineer's department.

At the end of 1945 the total mileage of sewers in the town was 32.47.

Drains, as distinct from sewers, total many miles, and include those for anti-malarial needs, the main purpose of which is to reduce the mosquito menace; roadside drains, a necessary part of road construction, and smaller drains which are in effect open sewers, but are necessary evils, and are the chief, if not the only, solution to the problem of sullage disposal in a town of comparatively rapid growth.

Other means of disposal are by cesspits and conserving tanks serving individual houses, which are emptied by the Cleansing Department. The work of removal is a charge against the occupier, or may be performed as a free service, according to the situation of the property.

HOUSING

The construction of houses for the African population went on apace. The Ziwani scheme has been completed, including the construction of shops with flats above. Any diffidence on the part of architects and sociologists regarding the African and his supposed qualms about living "upstairs" may be dispelled, for it was reported that no fewer than 140 applications were received for the first four flats and shops.

The Makongeni scheme, with its social centre and shops, made considerable progress, and, as a palliative, a scheme of temporary housing was designed and put into effect, to accommodate 1,200 persons.

The housing shortage is felt by all races, and an earnest beginning was also made to provide accommodation for the Asian population. This took the shape of flats in blocks of double-storeyed buildings on a site overlooking the Nairobi River valley and within easy reach of the centre of the town.

Bachelor quarters numbering 57 were erected within walking distance of the busy commercial area, and all were occupied on completion. It must be stressed, however, that these schemes for the housing of the overflowing Asian population hardly touch the fringe of the problem—and a problem it is, with overcrowding reaching dangerously high proportions, and a natural increase which in itself swamps the sincere but as yet insufficient efforts of the Municipal Council. The time must surely come when it will be the duty of all large employers of labour to provide housing for at least a fair percentage of their labour, leaving the local authority to accommodate the bulk of the "free labour" of the floating population.

This principle should apply to all races, for all suffer through the lack of suitable and sufficient accommodation in which they can make a home and develop qualities of family life now subdued, if not completely lost, owing to the irritations caused by living under uncongenial communal conditions.

A guide to the action which should be taken by employers was given by the Municipal Council when it was decided to construct a two-storeyed block of quarters to complete the Fire-Station scheme.

Multi-storeyed buildings in a town of rapidly-appreciating values should be considered, or the alternatives will be, not only subsidised housing, but subsidised transport.

TOWN PLANNING

Arrangements were entered into with a team of Town Planners from South Africa to visit Kenya during the year to advise upon the many problems which confront the Council in dealing with the natural expansion of the town, and to suggest means of preventing the perpetuation of many of the defects which already exist. As the Municipal area consists of roughly 32 square miles, there is ample room for a very considerable increase in building activity, and it was felt that the present was an opportune moment to secure the services of architects and technicians of wide experience, to draw up comprehensive plans for the development of the town which would ensure that such development would be properly co-ordinated, and avoid the many pitfalls which have beset not only Nairobi, but many cities of importance in other parts of the world. It was realised that subjects such as uniformity in the height of buildings, proper alignment of roadways, suitable location of light and heavy industries, the removal of offensive trades to more distant sites, provision of open spaces for recreation, the prevention of sprawl, and many other subjects of importance were in immediate need of solution, and could be dealt with better if they formed part of a properly co-ordinated plan, than if left to chance or dealt with piece-meal.

The team, which consisted of :—

Professor L. W. Thornton White, F.R.I.B.A., M.I.A., Architect, Mr. P. R. Anderson, B.Sc. (Eng.) A.M.I.C.E., A.M.T.P.I., Engineer, and Mr. Leo Silberman, B.A., B.Sc., as Sociologist, first arrived in

Nairobi on July 16th, and remained here until the end of the month, studying conditions, obtaining data, and consulting a variety of bodies, including Government, the Municipal Council and its officers, the K.U.R. and H., and the Chamber of Commerce, in addition to numerous individuals possessing specialised knowledge in various branches of science and industry.

The lines of study and research laid down by the team themselves included the preparation of a full civic survey of Nairobi, the obtaining of all the necessary data concerning the sociological structure of the various races comprising the complex population of the town, their needs and aspirations, the preparation of a plan for the scientific development of the city, the preparation of the necessary sketches and designs, the examination of the physical features of the town and its surroundings, including its water supply, and climate, and finally the composition of a "Master Plan," and a comprehensive report embracing their findings and recommendations.

The team returned on December 7th for a second visit, when they resumed their investigations, and work was carried on by them until the end of the year, when it was intimated that a preliminary report outlining their main conclusions would be presented to Council early in the coming year.

WATER SUPPLY

Average daily delivery from all sources in gallons :—

Date.	Kikuyu Springs.	Ondiri Swamp.	Ruiru River.	Municipal Boreholes.	Military Boreholes.	Combined Delivery.	
Jan. ...	1,128,000	130,000	750,000	60,000	30,800	2,098,800	gallons
Feb. ...	1,074,000	140,000	750,000	60,000	38,900	2,062,900	„
March ...	1,040,000	200,000	730,000	50,000	40,000	2,060,000	„
April ...	1,040,000	200,000	730,000	50,000	38,000	2,058,000	„
May ...	1,022,000	200,000	730,000	50,000	42,000	2,044,000	„
June ...	1,020,000	190,000	730,000	50,000	30,000	2,020,000	„
July ...	1,000,000	190,000	700,000	50,000	42,500	1,982,500	„
Aug. ...	980,000	157,000	675,000	50,000	34,000	1,896,000	„
Sept. ...	980,000	133,000	675,000	45,000	53,000	1,886,000	„
Oct. ...	914,000	100,000	675,000	45,000	51,500	1,790,900	„
Nov. ...	916,000	100,000	700,000	30,000	55,500	1,821,500	„
Dec. ...	916,000	100,000	712,000	25,000	46,000	1,847,000	„

The table shows the daily delivery each month and where the chief shortages took place.

	GALLONS.
Total quantity of water delivered to Nairobi, 1945 ...	716,621,400
Total quantity of water delivered to Nairobi, 1944 ...	747,111,500
Consumption registered at Treatment Plant	716,539,000
Consumption registered by Services	599,261,500

Loss, 16.37%, includes services not metered owing to the shortage in supply of meters, roads, footpaths, drainage construction and fire service.

New Construction : 12-inch Ruiru River pipe-line.

French Mission Pumping-Scheme. The four-station electric pumping-plant with 7,191 r. ft. of 6-inch asbestos piping was installed during the month of October, but owing to the low flow of water in the river not much use could be made of the scheme.

Doonholm Road Borehole. This borehole, drilled by the Military, was brought into commission during the month of October.

Distribution on Mains Extensions.

Kabete Camp	430 r. ft.	3-inch g. i. piping.
Welbeck Estate	4,810 r. ft.	3-inch g. i. piping.
Asian Bachelor Quarters	1,012 r. ft.	3-inch g. i. piping.
Makongeni Housing	776 r. ft.	4-inch b. i. piping.

NATIVE BURIALS

Deceased Africans who are members of a religious organisation are, as a rule, conveyed by relatives or friends to the appropriate cemetery, where they are interred according to the rites of their particular faith. Two hearses, stationed at the Municipal workshop, are available on payment of a small fee, but are seldom hired by private persons.

Pagan Africans are removed by these vehicles when they die in any of the hospitals or other institutions, Government paying the requisite fees, which vary somewhat with the type of establishment from which the body is removed.

The total number of bodies removed for burial in the various cemeteries was 909, as under :—

From The Native Civil Hospital	546
„ Pumwani Maternity Hospital	125
„ Infectious Diseases Hospital	107
„ Mortuary	67
„ Prison	36
„ Mathari Hospital...	28

AMBULANCES

The ambulance administration of Nairobi is undertaken by the departments most closely associated with specific needs. For infectious diseases the Medical Department, through the Infectious Diseases Hospital, normally operates four vehicles, though this number is not always available, as it is necessary to consider the needs of other branches as occasion arises.

The Municipal Ambulance, kept at the fire-station, continued to do useful work during the year, and carried 114 Europeans and 23 Asians, with a total mileage of 1,108.

For the removal to hospital of non-infectious sick four ambulances are retained, but two of these are reported to be reaching a state of unreliability; they are kept at the dispensary in Government Road.

Accident cases, being within the range of police inquiries, are conveyed by the single vehicle kept for the purpose. This ambulance has proved sufficient, so far, for the calls made on the service.

The African locations were provided with an ambulance during the year, thus fulfilling a very real need, as patients, some of them seriously ill, had previously to wait many hours before removal to hospital.

MUNICIPAL POUND

A pound is maintained by the Municipal Council in the vicinity of the abattoir lairages; it accommodated during the year, for varying periods :—

Oxen	903	Donkeys	51
Dogs	258	Monkey	1
Goats	70	Rabbit	1

The large number of dogs received into the pound was doubtless due to the abandonment of these animals by members of the forces and others on leaving the town. It is unfortunately the case that many animals now treated as pets will continue to be left to their fate as inconsiderate owners are transferred to other areas. Of the 258 dogs impounded, 63 were claimed by their owners and released, 131 were sold, and the remaining 64 humanely destroyed.

CARCASES REMOVED

The remains of 78 animals were removed from various places and suitably disposed of :

Dogs	52	Mules, ponies and donkeys ...	8
Oxen	9	Horse	1
Cats	7	Leopard	1

These services are not entirely a charge on the Council's finances, for whenever possible fees are levied; during the year a total sum of Shs. 3,429/- was collected by Mr. Labrosse, the overseer in charge of the work.

MEAT INSPECTION

Compared with 1944, there was a reduction in the total number of animals inspected for civilian consumption during the year. Details being as follows :—

	1944.	1945.	Decrease.	Increase.
Oxen	25,566	22,415	3,151	—
Calves	491	802	—	311
Grade sheep	9,489	11,469	—	1,980
Native sheep and goats ...	34,628	23,716	10,912	—
Pigs	5,052	7,425	—	2373
Camels	47	—	47	—
Buck	142	—	142	—
Totals:	75,415	65,827	14,252	4,664

This reduction does not necessarily mean that the consumption of meat has been less. The difference is probably accounted for owing to the animals being larger and the aggregate weight of the carcases being approximately equal to those in 1944.

For comparison with the five preceding years (1940/1944) the following details are submitted, and it will be noted that on the average annual kill the numbers of cattle, calves, and grade sheep are fairly constant, whilst there is a reduction of about 34,000 native sheep and goats, and an increase of some 2,500 pigs.

	Oxen.	Calves.	G/sheep.	N/sheep & goats	Pigs.	Camels.	Buck.
1940	23,503	507	19,973	59,924	2,623	—	—
1941	19,475	833	11,314	72,363	3,839	—	—
1942	14,701	838	8,991	75,675	5,148	—	—
1943	25,858	737	5,493	45,629	7,816	260	9
1944	25,566	491	9,489	34,628	5,052	47	142
Totals:	109,103	3,406	55,260	288,219	24,478	307	151

AVERAGE ANNUAL KILL

	Oxen	Calves	G/sheep	N/sheep & goats.	Pigs.
(1940-1944) ...	21,802	681	11,052	57,644	4,895
ANNUAL KILL 1945 ...	22,415	802	11,469	23,716	7,425

Condemnations for 1945, and the five preceding years are as follows :—

	Oxen.	Calves.	G/sheep.
1940	5,010 or 21.3%	... 106 or 20.9%	... 189 or 0.9%
1941	5,253 „ 26.9	... 195 „ 23.4	... 191 „ 1.6
1942	3,074 „ 20.9	... 218 „ 26.0	... 74 „ 0.8
1943	2,758 „ 10.6	... 84 „ 11.4	... 22 „ 0.4
1944	3,798 „ 14.8	... 71 „ 14.4	... 59 „ 0.6
Totals:	19,893 or 18.2%	... 674 or 19.7%	... 535 or 0.9%

	N/sheep & goats.	Pigs.	Camels	Buck.
1940 ...	2,086 or 3.4%	... 42 or 1.6%	... —	... —
1941 ...	5,753 „ 7.9	... 73 „ 1.9	... —	... —
1942 ...	7,737 „ 10.2	... 85 „ 1.6	... —	... —
1943 ...	1,897 „ 4.1	... 73 „ 0.9	... 19 or 7.3%	... 1 or 11.1%
1944 ...	1,198 „ 3.4	... 26 „ 0.5	... — —	... 3 „ 2.1%
Totals:	18,671 or 6.4%	... 299 or 1.2%	... 19 or 6.1%	... 4 or 2.6%

Numbers and percentages for the year 1945 :—

Oxen	Calves	G/sheep	N/sheep & goats.	Pigs.
3,269 or 14.5%	143 or 17.8%	64 or 0.5%	2,190 or 9.2%	76 or 1.0%

Annual average numbers and percentages over the five years 1940—1944 :—

Oxen.	Calves.	G/sheep.	N/sheep & goats.	Pigs.
3,978 or 18.2%	134 or 19.7%	107 or 0.9%	3,734 or 6.4%	60 or 1.2%

Owing to the instructions of Council to cook certain rejected measly carcases, a considerable saving in beef was again effected. Particulars for 1945, and the two preceding years are as follows :—

1945. Number of carcases cooked 1,844 with a reduction in the condemnation rate from 14.5% to 6.2%.

1944. Number of carcases cooked 2,133 with a reduction in the condemnation rate from 14.8% to 6.5%.

1943. Number of carcases cooked 1,738 with a reduction in the condemnation rate from 10.6% to 4.0%.

The majority of cattle come from native reserves in Kenya and oxen and native sheep and goats has varied considerably.

The majority of cattle and come from native reserves in Kenya Tanganyika, and occasionally they have been in very poor condition. Drought and long distances travelled having been chiefly responsible.

Some good cattle came from stockbreeders and farmers together with a number of old, worn out cows and bulls for which there would be no market in normal times.

The quality of native sheep and goats has varied from good to very poor, depending on the conditions existing in the areas from which they were derived.

About 5.0% of the calves slaughtered were immature.

The number of emaciated animals slaughtered was 2,641, comprising 900 oxen, 58 calves, 48 grade sheep, 1,631 native sheep and goats, and 4 pigs ; a table will be found elsewhere in this report.

Council commenced dressing poultry at the abattoir in February, and up to the end of the year 86,698 had been dealt with. Hitherto, most poultry dressing in Nairobi took place in inadequate and unsuitable premises, giving rise to nuisances, but since the work has been done at the abattoir these nuisances have been abated.

Some improvement in the accommodation for dressing poultry and pigs is still necessary, but as Council are contemplating building a new abattoir, the question of effecting structural improvements has been left in abeyance.

The numbers of animals slaughtered for each year since 1930, and up to the end of 1945, are included as they may form a useful guide to the Council in their deliberations as to the capacity likely to be required in a new abattoir for Nairobi.

Numbers of animals killed in the period 1930—1939.

	Oxen.	Calves.	G/sheep.	N/sheep & goats.	Pigs.
1930	11,349	266	9,436	19,288	1,479
1931	13,663	416	8,133	19,920	1,961
1932	14,098	441	8,114	18,740	1,865
1933	15,892	518	7,710	20,835	1,802
1934	14,795	702	8,288	21,594	1,959
1935	13,813	537	10,668	23,417	2,226
1936	13,866	496	12,098	26,199	2,334
1937	10,521	395	12,228	30,786	2,045
1938	10,770	465	12,742	36,114	2,823
1939	12,365	514	14,783	46,553	3,522
Totals:	131,132	4,750	104,200	263,446	22,016
Average annual kill for 10 years :—	13,113	475	10,420	26,344	2,201

Numbers of animals inspected for civilian consumption only, in the period 1940—1945.

	Oxen.	Calves.	G/sheep.	N/sheep & goats.	Pigs.	Camels.	Buck.
1940	23,503	507	19,973	59,924	2,623	—	—
1941	19,475	833	11,314	72,363	3,839	—	—
1942	14,701	838	8,991	75,675	5,148	—	—
1943	25,858	737	5,493	45,629	7,816	260	9
1944	25,566	491	9,489	34,628	5,052	47	142
1945	22,415	802	11,469	23,716	7,425	—	—
Totals:	131,518	4,208	66,729	311,935	31,903	307	151

Average annual kill for 6 years (War years).

21,920	...	701	...	11,121	...	51,989	...	5,317	...	—	... —

Since 1940 the following animals have been slaughtered on behalf of the military:—

	Oxen.	G/sheep.	N/sheep & goats.	Pigs.
1940 ...	2,342	4,488	22	—
1941 ...	30,216	9,123	3,918	2,080
1942 ...	25,062	4,993	37,516	5,757
1943 ...	28,744	5,588	34,843	10,758
1944 ...	26,660	5,373	35,863	8,652
1945 ...	22,123	3,364	30,091	9,338
Totals: ...	135,147	32,929	142,253	36,585

INSPECTED.	CONDEMNED:— Number.	All causes rate.	C. Bovis. rate	Weight in lbs. meat & offal.	Emaciated animals included in condemns.
G. oxen ...	3,266	164	5.0%	3.7%	90,785	30
N. oxen ...	19,139	3,105	16.2%	10.8%	839,013	870
Calves ...	802	143	17.8%	9.2%	9,812	58
G. sheep ...	11,469	64	0.5%	—	9,314	48
N. sheep ...	10,045	609	6.0%	—	13,324	492
Goats ...	13,671	1,581	11.5%	—	40,632	1,139
Pigs ...	7,425	76	1.0%	—	25,465	4
Total ...	65,425	5,742	8.7%	9.7%	1,028,345	2,641

CONDITIONS NECESSITATING CONDEMNATION:—

	G. oxen.	N. oxen.	Calves.	G. sheep.	N. sheep.	Goats.	Pigs.	Total.
Bruising ...	6	16	—	1	1	—	3	27
Cancer	—	1	—	—	—	1	—	2
C. Bovis	123	2,075	74	—	—	—	—	2,272
C. Cellulosae	—	—	—	—	—	—	37	37
C. Lymphadenitis		—	—	2	2	5	1	10
Dropsy	2	77	1	—	51	77	—	208
Dropsy and emaciation	19	646	7	42	439	641	2	1,796
Fevered ...	6	170	—	1	12	78	5	272
Foot & Mouth Disease	—	14	—	—	—	—	—	14

Conditions necessitating condemnation (continued)

Heartwater ...	—	—	—	—	79	688	—	767
Immaturity ...	—	—	43	—	—	—	—	43
Jaundice ...	2	37	3	—	3	2	3	50
Moribund ...	—	14	—	—	—	—	—	14
Pleuro pneumonia	—	4	—	1	1	—	—	6
Septic condition ...	6	42	4	17	21	89	24	203
Tuberculosis ...	—	9	—	—	—	—	—	9
Navel Ill ...	—	—	8	—	—	—	—	8
Joint Ill ...	—	—	3	—	—	—	—	3
Filariasis ...	—	—	—	—	—	—	1	1
Total	164	3,105	143	64	609	1,581	76	5,742

ORGANS CONDEMNED:—

Hearts.	Heads.	Tongues.	Kidneys.	Livers.	Lungs.	Spleens.	Stomachs.	Intestines.
2,442.	295.	295.	2,743.	14,778.	7,195.	491.	485.	139.

Total: 28,863.

SUMMARY AS TO THE DISPOSAL OF BEEF CARCASES:—

Rejected for C. Bovis and passed for cooking by Council	1,884	or approx. 8.4%.
Rejected and passed for conversion into inedible by-product	1,375	or approx. 6.2*.
Considered unfit to handle and burnt	10	
Passed	19,146	or approx. 85.4
Total:	22,415	100.0%.

*Represents actual loss of beef.

POULTRY:—

Inspected: 86,698. Condemned: 797.

MALARIA, AEDES CONTROL, AND RODENT DESTRUCTION

I MALARIA:

The Military authority No. 91 E. A. Malaria Control Co. continued throughout the year the control in the Township, and of Camps beyond the Municipal boundary.

Malaria Cases Reported for the year are as follows :—

	European.	Asian.	African.	Total.
Resident (in Township) ...	29	202	79	310
Contracted outside Township	32	53	28	113
Non-Residents (outside) ...	39	34	120	193

Approximately 97% of the cases were subtertian.

Deaths from Malaria for the year amounted to 2 Europeans, 4 Asians and 12 Africans, 4 Africans being infants under one year of age.

Anopheles gambiae is the vector species in Nairobi, and adults were taken mostly in the peripheral catching stations in all months except March, April, October and December. In all, 52 Township stations and 16 outside stations produced Anopheles gambiae ; larvae were also found in most months, but no extensive breeding was recorded.

Oiling control was continued throughout the year, and rivers received attention during the dry season.

The canalisation of the Ngong River was completed to a point near the quarries, but owing to the high cost of labour and the cement shortage the full length of the proposed section could not be carried out. The earth canalisation of the Kibera portion of this river has become much eroded and damaged.

Malaria control will be handed over to the Municipal Authorities early in 1946.

II Aedes Mosquito Control (Yellow Fever)

This is the 5th annual report of this department of Public Health activities ; it can be seen from the accompanying figures that control measures, and that a policy of " polling " may have to be adopted to that a state has now been reached when it would appear that we are unable with the present system to reduce the index figure.

It is felt that we have now reached a limit with normal control measures and that a policy of " policing " may have to be adopted to bring the general public to a point where they will realise that unless co-operation is forthcoming, legal action will have to be taken in every instance of contravention of the Mosquito By-laws 1944. The notices despatched clearly show how little effect they have had on the persons on whom they were served. It is essential that prosecutions should be impartial, and that persons in all walks of life should be treated without bias.

A great deal of the time of the overseers has been occupied in the serving of notices, since it is necessary that they should be delivered to the addressee personally. As many as six visits have been made to a single individual in order to carry this out. This procedure is extravagant, and costly, and requires an excessive expenditure of time on the part of an overseer which might have been spent more profitably in checking the work of the African Mosquito searchers. Some amendment of this procedure is suggested.

Yellow Fever Inoculations: No cases of yellow fever were reported during the year but inoculations to meet international requirements were continued. Persons immunised at the Town Hall Clinic numbered 9428.

The Aedes Index: The index has been arrived at by taking the mean of the total inspections of plots and buildings as shown by each weekly cycle of five days. Appendix I has been prepared to give an indication of the results of the measures adopted since the inception of the control.

The index for the year is 0.08% a substantial increase on 1944 of 0.04%.

1940	1941	1942	1943	1944	1945
6.3%	1.47%	0.413%	0.09%	0.04%	0.8%

This increase in the index is accounted for by the large numbers of Aedes aegypti found in 1945, during which 266 collections were made as compared with 144 in 1944; the largest numbers were obtained during the months of May, June, and July, from tins and scrap iron collected from Military salvage dumps.

Total premises searched and indices :—

	Total Premises Inspected	Aedes Index	Average per week	Total Inspections Made	Aedes Index:
1944	262,704	0.04%	5,052	293,185	0.08%
1945	285,254	0.09%	5,485	319,780	0.08%

This figure includes inspections by Senior African Headmen and by the Overseers.

Details of inspections are given in Appendix II.

The figure for potential foci has also increased during the year, when 1,500,983 foci were searched compared with 1,368,619 for 1944.

Appendix III should be studied in order to gain an idea of the numbers of, and varieties of permanent and temporary foci where breeding of the two main varieties of mosquito found in and around Nairobi were obtained.

As usual rainwater storage tanks show the highest incidence, 53 collections having been made. A noticeable increase in incidence is shown this year in tins, drums, motor parts and tyres. Most of these foci were located in scrap yards during the months of May, June and July.

A comparative table of the principal foci is of interest and shows certain features indicative of the success of control measures :—

	1941	1942	1943	1944	1945
Rainwater tanks	177	255	97	63	53
Drums	199	541	24	16	26
Tins	—	—	62	9	84
Motor parts	—	51	—	4	16
Motor tyres	—	23	—	—	12
Gully Traps	7	—	13	2	—
Oil Tanks	—	—	—	2	11

As shown in Appendix III, 1,500,983 foci were found producing an aedes index of 0.01%. Culicine breeding also increased during the year, the main foci being earth drains, sunken drums, bath water pits and soakage pits, concrete drains, drums, septic tanks, tins, and rainwater tanks.

Details of the breeding places searched and larvae found are given in Appendix V.

The incidence of mosquito breeding (all species) follows the rainfall unusually well, as is shown in the accompanying graph. (Appendix VI).

The permanent foci maintain a fairly even curve which only rises after the peak rainfall of May, and averages 77 collections per month ; Aedes 5.7 and Culex spp. 71.

The line of temporary foci shows a very sharp rise from May to July with a second rise in November during which month 6 inches of rain fell.

As will be noted in the Table of Residential areas of the Town (Appendix VI), large plots of land produce the greatest number of foci ; Blocks A,F,G,J, and D, Eastleigh, and Block RS of the Fairview area. Breeding places in A,F,G,J, and D are rainwater tanks, sunken drums, soak pits and septic tanks. It is of interest to note that in 9 out of 10 complaints received, the breeding has been located in septic tanks and soak pits. In the Eastleigh and Fairview areas the main foci have been septic tanks or soakage pits, an entirely unsuitable system for the district, owing to the impermeable nature of the subsoil ; if a sewerage system were installed, an immediate improvement would be effected, and Eastleigh would lose its unenviable reputation as the most heavily infested district of the town ; the presence of the Aerodrome in this unhealthy neighbourhood should be an added incentive to effect the change over with as little delay as possible.

NOTICES AND PROSECUTIONS,

Only nine prosecutions were initiated during the year. Convictions were secured in all cases and fines ranging from 25/- and 10/- costs to 100/- being imposed. The total fines being 495/- with costs 90/-.

NOTICES DESPATCHED FOR MOSQUITO BREEDING:

Number of persons receiving				one	notice	...	...	...	1,047
,,	,,	,,	,,	two	notices	...	...	...	142
,,	,,	,,	,,	three	,,	...	...	...	42
,,	,,	,,	,,	four	,,	...	...	...	14
,,	,,	,,	,,	five	,,	...	...	...	8
,,	,,	,,	,,	six	,,	...	...	...	8
,,	,,	,,	,,	seven	,,	...	...	...	3
,,	,,	,,	,,	eight	,,	...	...	...	4
,,	,,	,,	,,	nine	,,	...	...	...	1
,,	,,	,,	,,	eleven	,,	...	...	...	1
,,	,,	,,	,,	thirteen	,,	...	...	...	2
,,	,,	,,	,,	eighteen	,,	...	...	...	1
							Total:		1,273

III CONTROL OF VERMIN AND RODENTS:

The staff consisted of one European Overseer, and a gang of 25 Africans. The Overseer, Mr. A. J. Mathews, resigned at the end of the year, and the head African, Nelson Obiero, took over the rat work and disinfections.

The report is divided into two parts—Rats and Vermin.

(*a*) RATS:

Rodent control measures were continued throughout the year in the systematic survey commenced in 1944. The commercial area was divided into small sections; each one was trapped and poison baited for 14 days and subjected to a detailed premise to premise inspection. These often resulted in grain stores and small general produce merchants shops, being turned inside out in order to make a thorough examination. Notices were served on the owners and occupiers of all stores showing a high incidence of rat infestation. These notices required occupiers to rat proof the premises after our gang had made a thorough trapping.

Trapping and baiting carried out on the pre-baiting system proved very effective.

When stores were being examined it was frequently necessary to remove goods and furniture from the premises, and when this was done the gang caught rats by hand, as many as 190 being killed in this way in one store.

Outside rat work consisted of routine examination, gassing and catching of rats at the Municipal Incinerator dump, Abattoir, and Nairobi River near these two places. Hundreds of rats were killed and many hundreds must have been destroyed by poison gas.

Rats killed and counted for the year amounted to 12,748 and 4,233 were accounted for by the Railway Administration. Poison baiting must have accounted for several thousands more.

Premises examined in the commercial area numbered 1,033, of which 787 were found infested to a greater or lesser degree, 76.2% of the total, a high figure. In our initial survey in 1944, 87% of the premises examined were found to be infested.

Prosecutions: 15 firms were prosecuted for failing to carry out antirodent measures, or for having infested premises. All firms were convicted and fines ranging from 100/- to 500/- were imposed by the magistrates, in all, fines amounting to 3,200/- with costs of 168/- were inflicted.

There is little evidence to be found that traders in the Commercial area consider the rat problem from the plague aspect, or from that of damage to goods, which must amount to several thousand pounds (sterling) per annum. Much food stuff has had to be condemned due to its being fouled by rats, but if frequent inspection could be made, much more would be condemned. Traders do not appear to understand that food can be contaminated by rats, and they are prepared to sell such goods for human consumption.

It is becoming more obvious that in order to have sufficient control of rats that a full time Rodent officer should be appointed with sufficient African staff, who when trained, make excellent rat catchers.

During the year no plague was reported in Nairobi, although cases occurred outside the Township, in the Native Reserve.

A gang of ten Africans was trained for the M.O.H. Kiambu, and the Municipal gang was seconded for a month to work at Thika and Ruiru. Their work was reported upon as being excellent.

A number of rats were found to be harbouring mites which attacked man causing severe dematitis. This species of mite still awaits identification.

In the laboratory 3,381 rats were examined for B. pestis but none were found to be positive.

There is evidence that bed bugs (Cimex) can be transmitted from place to place by rats, as in some premises rat nests were found to be full of bugs, and bugs were noted in various parts of the buildings which were not used for human habitation.

Blood examinations of rats from all parts of the town show a high incidence of *Trypanosoma lewisi.*

A special report on the Rat survey carried out in 1944 and 1945 is now being prepared.

(*b*) PESTS:

Bed bugs appeared to be on the increase, and few if any public buildings, and transport, are free from them. During the year 74 rooms in 43 buildings were treated by cyanide gas, and the gas chamber at Kariakor was used 54 times for furniture etc., from 657 rooms. Additional By-laws relating to inspection of premises and control are urgently required, as we have found our hands tied on several occasions, when complaints were received from occupants of public buildings. Taxis frequently harbour bugs. Doubtless African batmen have infested European rooms and buildings, and even European military kit has been found so. Some form of control is required for second hand goods, complaints were noted from both dealers and purchasers of these; it appears to be a common practice when an article of furniture became infested, to send it to a second hand merchant for sale to the public.

Numbers of inspections were carried out on premises infested with fleas. Towards the end of the year a few buildings were treated successfully with D.D.T. solution.

The small vermin gang also undertook the capture and destruction of stray mangy dogs and cats. Dog control requires tightening up to prevent an outbreak of rabies. Bats have also been dealt with in a number of premises, and even swarms of bees have been removed. Ants during the dry season gave rise to complaints and these were dealt with by poison bait and D.D.T.

Disinfections: 66 rooms were disinfected after cases of infectious disease.

African Staff: The Vermin gang act as vaccinators in case of threatened smallpox.

COMPARATIVE TABLES FOR 1940 TO 1945.

Year	Total Houses Searched	Average per Week	Aedes Index	Total Inspections	Aedes Index	Foci Searched	Aedes Index	Aedes Collections	Culex Collections	All Species	Aedes Index	Culex Index	All Species Index
1941	Original Aedes survey made with an index of 6.3% with some areas of the town reaching 17%.						—	—	—	—	6.3%	—	—
1941	92,141	1,772	Six months of the year only.			232,568	0.22%	522	855	1,377	1.47%	—	*
1942	272,476	5,240	—	—	—	1,220,661	0.09%	1,133	502	1,635	0.413%	0.607%	1.02%
1943	251,084	4,828	—	—	—	943,127	0.02%	232	961	1,193	0.09%	0.47%	0.56%
1944	262,704	5,052	—	239,185	—	1,368,619	0.01%	144	1,428	1,572	0.04%	0.54%	0.53%
1945	285,254	5,485	0.09%	319,780	0.08%	1,500,934	0.01%	266	1,499	1,765	0.08%	—	—

*Six months of 1941 only.

TOTAL OF HOUSES INSPECTED:

Block	A.	9,571
„	B.	8,318
„	C.	12,416
„	D.	11,659
„	E.	10,892
„	F.	11,020
„	G.	12,146
„	H.	18,730
„	J.	8,561
„	K.	10,959
„	L.	10,917
„	M.	14,029
„	N.	23,480
„	O.	22,878
„	P.	20,866
„	Q.	21,793
„	R.	13,217
„	S.	13,168
„	T.	255
„	U.	24,632
„	V.	1,004
„	X.	4,182
„	Y.	561
	Total:	285,254
	Average per week per five day cycle ...	5,485

TOTAL INSPECTIONS:

January		26,734
February		23,700
March		26,154
April		25,562
May		27,880
June		26,124
July		27,312
August		27,164
September		24,322
October		29,284
November		27,837
December		27,707
	Total:	319,780
	Average per week per five day cycle ...	6,147

Permanent Foci.	No.	Aedes aegypti	Aedes other species	Culex.	Total all species	Indices. Aedes aegypti.	Aedes other species.	Culex.	Total all Species.
Rainwater Tanks	45,798	53	—	26	79	0.11%	—	0.05%	0.17%
Septic Tanks	78,682	—	—	69	69	—	—	0.08%	0.08%
Soakage Pits	21,136	—	—	133	133	—	—	0.62%	0.62%
Sunken Drums & Bath Pits	31,579	3	—	203	206	0.009%	—	0.64%	0.65%
Gully Traps	169,928	9	—	102	111	0.005%	—	0.06%	0.06%
Earth Drains	112,370	2	—	212	214	0.001%	—	0.18%	0.19%
Concrete Drains	317,813	2	—	112	114	0.0006%	—	0.03%	0.03%
TOTAL:	777,306	69	—	857	926	0.008%	—	0.11%	0.12%
Temporary Foci	723,677	197	11	631	839	0.02%	0.001%	0.08%	0.11%
GRAND TOTAL:	1,500,983	266	11	1488	1,765	0.017%	0.0006%	0.09%	0.11%

TOTAL BREEDING AND TYPES OF LARVAE PER MONTH.

PERMANENT FOCI.

C=Culecines; A=Aedes; and T=Total.

	January			February			March			April			May			June		
	C.	A.	T.	C.	A.	T.	C.	A.	T.	C.	A.	T.	C.	A.	T.	C.	A.	T.
Rainwater Tanks	2	6	8	2	6	8	4	8	12	2	4	6	1	5	6	3	3	6
Septic Tanks	5	—	5	17	—	17	13	—	13	5	—	5	4	—	4	3	—	3
Soakage Pits	19	—	19	12	—	12	11	—	11	8	—	8	10	—	10	28	—	28
Sunken Drums & Bath Pits	11	—	11	23	—	23	20	—	20	10	—	10	11	—	11	23	—	23
Gully Traps	9	5	14	4	1	5	12	—	12	19	1	20	3	1	4	11	1	12
Earth Drains	11	1	12	14	—	14	8	—	8	6	—	6	23	—	23	43	—	43
Concrete Drains	4	—	4	12	—	12	13	—	13	7	—	7	7	—	7	7	2	9
TOTAL:	61	12	73	84	7	91	81	8	89	57	5	62	59	6	65	118	6	124
Temporary Foci	63	4	67	34	5	39	46	3	49	28	11	39	76	47	123	113	38	151
GRAND TOTAL:	124	16	140	118	12	130	127	11	138	85	16	101	135	53	188	231	44	275

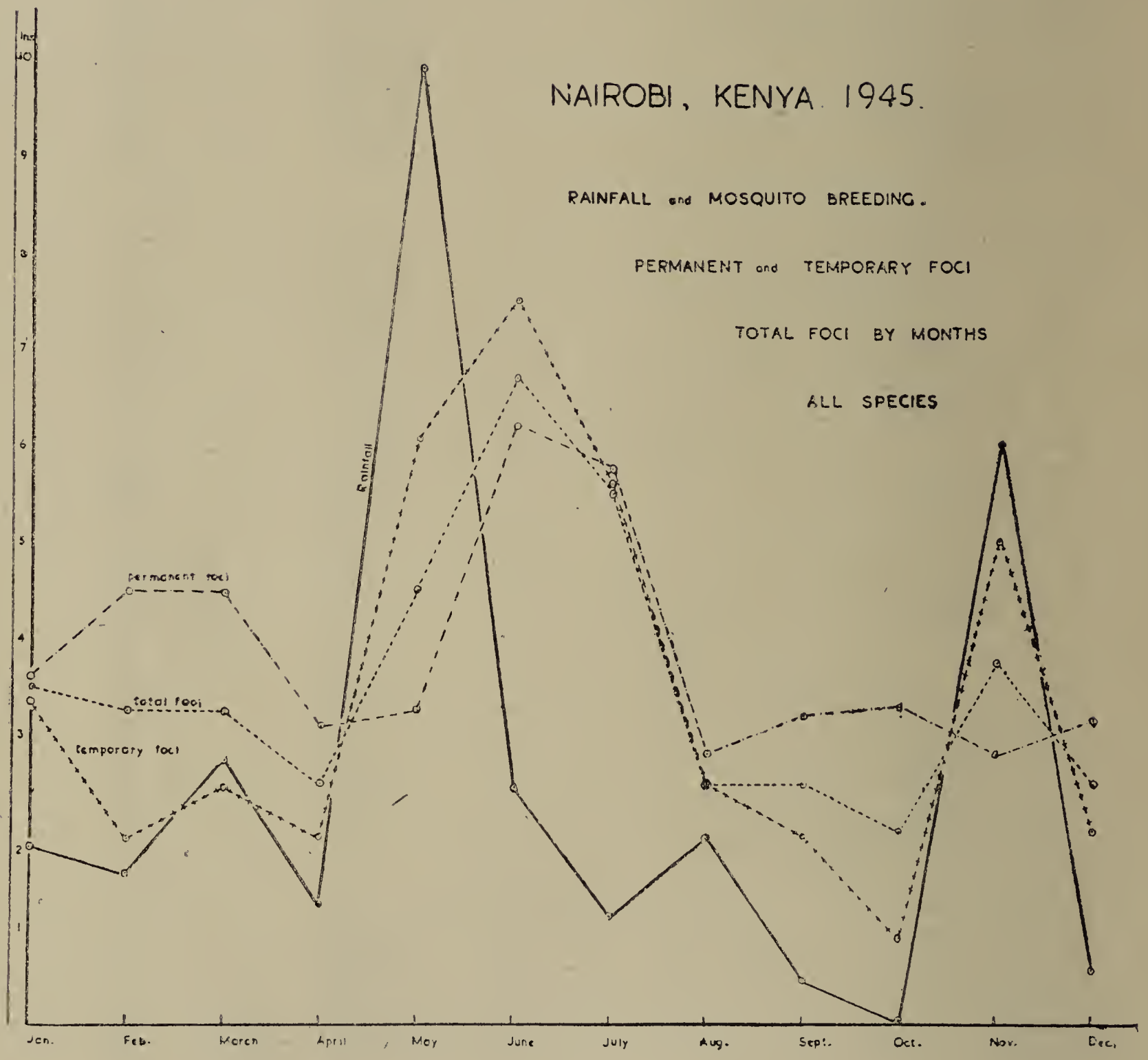
TOTAL BREEDING AND TYPES OF LARVAE PER MONTH.
PERMANENT FOCI.

	July			August			September			October			November			December		
	C.	A.	T.	C.	A.	T.	C.	A.	T.	C.	A.	T.	C.	A.	T.	C.	A.	T.
Rainwater Tanks	2	4	6	3	2	5	2	2	4	4	6	10	1	3	4	—	4	4
Septic Tanks	2	—	2	—	—	—	1	—	1	4	—	4	6	—	6	9	—	9
Soakage Pits	14	—	14	4	—	4	3	—	3	14	—	14	5	—	5	5	—	5
Sunken Drums & Bath Pits	27	2	29	16	—	16	10	—	10	14	1	15	22	—	22	16	—	16
Gully Traps	9	—	9	4	—	4	11	—	11	8	—	8	5	—	5	7	—	7
Earth Drains	38	—	38	18	—	18	22	1	23	5	—	5	12	—	12	12	—	12
Concrete Drains	17	—	17	10	—	10	12	—	12	10	—	10	3	—	3	10	—	10
TOTAL:	109	6	115	55	2	57	61	3	64	59	7	66	54	3	57	59	4	63
Temporary Foci.	66	46	112	36	15	51	30	9	39	18	—	18	86	14	100	35	5	40
GRAND TOTAL:	175	52	227	91	17	108	91	12	103	77	7	84	140	17	157	94	9	103

APPENDIX V.

List and Total of foci examined and larvae located during the year:—

		Larvae.
Septic Tanks	78,682	69
Rainwater Tanks	45,798	79
Gully Traps.	169,928	111
Drains, Earth	112,370	214
Drains, Concrete	317,813	114
Guttering	3,931	1
Sunken Drums and Bath Pits	31,579	206
Drums	161,185	166
Tins	189,999	147
Bottles and Jars	13,550	8
Motor Tyres	26,228	37
Motor Parts	32,803	36
Hollows	3,905	99
OTHERS:		
Plants, not specified	1,010	—
Sisal	49,418	—
Bamboos	10,348	1
Cacti	4,232	—
Bananas, Cultivated	104,046	—
Bananas, Wild	833	—
Tree Holes	12,289	11
Cocoanut Shells	15,034	1
Palms	2,548	—
Pineapples	1,351	—
Soakage Pits	21,136	133
Baths	1,909	13
Bird Baths	7,740	7
Rubbish Pits	262	2
Karais	5,073	9
Water Meters	27,090	65
Buckets	9,140	14
Basins	603	1
Pots	5,046	24
Wells	1,743	18
Air Raid Shelters	177	10
Fish Ponds	1,124	9
Hot Water Tanks	8,462	24
Cement Tanks	1,212	14
Underground Tanks	458	2
Hand Grips in Inspection Covers	802	1
Egg Shells	284	—
Wheelbarrows	82	1
Barrels	770	11
Cooling Tanks	1,035	2
Batteries	4,745	14
Small Drums	32	—
Sumps	1,346	18
Tar Boilers	168	5
Milk Cans	1	1
Holes	37	12
Dust Bins	1	1
Troughs	11,551	21
Pits	21	3
Pestle and Mortar	1	1
Wooden Cases	3	3
Carried Forward	1,500,934	1739


NAIROBI, KENYA. 1945.
RAINFALL and MOSQUITO BREEDING.
PERMANENT and TEMPORARY FOCI
TOTAL FOCI BY MONTHS
ALL SPECIES
Rainfall
permanent foci
total foci
temporary foci
Jan.
Feb.
March
April
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.

List and Total of foci examined and larvae located during the year: (contd.)

		Larvae.
Brought Forward	1,500,934 ...	1739
Swamps	3 ...	2
Graves	2 ...	2
Water Cisterns	11 ...	1
Steel Water Tanks	10 ...	2
Rivers	9 ...	8
Braziers	2 ...	—
Saw Pits	1 ...	1
Grindstones	1 ...	1
Concrete Splash Basins	2 ...	2
Murram Pits	2 ...	2
Zinc Lining from wooden case	1 ...	1
Crocodile Ponds	2 ...	1
Foundation Excavations	2 ...	2
Watering Cans	1 ...	1
	...	
Total:	1,500,983 ...	1765

FOCI BREEDING PER BLOCK AND INDICES.

BLOCK.				No. of Houses	Aedes aegypti	Aedes other species	Culex	Total all species	INDICES. Aedes aegypti	Aedes other species	Culex	Total all species
A. Burnbrae.	E.	...	...	184	32		89	121	.33%		.93%	1.26%
B. Kilimani.	E.	...	...	160	6		72	78	.07%		.86%	.93%
C. Hill Area.	E.	...	...	238	13		54	67	.10%		.43%	.53%
D. Hill Area	E.	...	...	224	15		76	91	.12%		.65%	.78%
E. Groganville.	E.	...	...	209	12	3	38	53	.11%	.02%	.35%	.48%
F. Upper Parklands.	E. A.	...		212	80	2	95	177	.72%	.01%	.86%	1.60%
G. Parklands.	A.	...	...	233	33	1	119	153	.27%	.008%	.98%	1.26%
H. City Park.	A.	...	...	360	7		82	89	.03%		.43%	.47%
J. Muthaiga.	E.	...	...	164	55	2	78	135	.64%	.02%	.91%	1.57%
K. Commercial.	Mixed.	...		210			84	84			.76%	.76%
L. Commercial.	A.	...	...	209			22	22			.20%	.20%
M. Commercial.	A.	...	...	269			51	51			.36%	.36%
N. Ngara	A.	...	...	451		1	55	56		.004%	.23%	.23%
O. Pumwani.	N.	...	...	440	1		29	30	.004%		.12%	.13%
P. Pumwani.	N.	...	...	401			26	26			.12%	.12%
Q. Racecourse.	A.	...	...	419			58	58			.26%	.26%
R. Fairview.	A.	...	...	254	8		92	100	.06%		.68%	.75%
S. Eastleigh.	A.	...	...	253	1		221	222	.007%		.16%	.16%
T. Farms.	A. E	...	...	5			22	22			8.62%	8.62%
U. P.W.D. Mixed.		...	...	473	2		110	112	.008%		.44%	.45%
V. Eastleigh	A. N.	...	...	19			4	4			.39%	.39%
X. Kabete Road.	E	...	...	80			9	9			.21%	.21%
Y. Government House.	Mixed.			11	1	2	2	5	.17%	.35%	.35%	.89%
TOTAL:					266	11	1488	1765				

Note.—E=European Area. A=Asian Area. N=Native Area.

CLEANSING DEPARTMENT.

The Department was transferred to the control of the Medical Officer of Health early in the year.

As in 1944 there were again big increases in all sections of the Department during the year. All mechanical vehicles became worse and the position as regards transport is now very bad. An order was placed during the year for a Scammell Mechanical Horse and 12 yd. body ; when this arrives it should improve the position and ease the pressure of work on the other transport which is now unreliable.

The latrines in the native locations were transferred to the control of the Superintendent of Native Locations early in the year and remained under his control till the end of December.

The staff of the Department at the end of December was :—

Superintendent and Assistant.

Conservancy.

1 Overseer, 1 African Overseer and 145 African labour,

Refuse Removal.

1 Overseer, 1 African Overseer and 129 African labour,

Scavenging.

1 Overseer, 1 African Overseer and 215 African labour,

Public Conveniences, and Sweeper Service.

1 Overseer, 1 African Overseer and 54 African labour

The number of labour engaged on public conveniences in native locations is not included in the figure given.

The transport of the Department increased by the addition of 3 lorries , 2 of these were new Dodge vehicles and were used on Conservancy. The third was an old road Department vehicle and was fitted with a refuse removal body.

The Conservancy foreman was summarily dismissed in November for insubordination.

Mr. L. Rene, refusal removal overseer, died suddenly on duty at the end of October.

Conservancy: Buckets increased throughout the year from 6,641 in January to 7,627 at the end of the year. This increase was largely due to expansion in the town, a very large number of new buildings coming into use.

The labour situation was difficult, and there was an excessive number of complaints which were very largely reduced when Mr. T. T. Pienaar, Conservancy Overseer, had become familiar with his duties. He had only a few days in which to learn his job before Mr. Viljoen left to take over his duties at the Fire Station; Mr. Viljoen was at the Fire station or on leave for the whole year. This threw a great deal of extra work on an already depleted staff.

The Cleansing station dealt with 9,204 tons during the year, an increase of nearly 2,000 tons.

An electric motor was installed to work the pump at the Cleansing station and this proved far more satisfactory than the petrol motor formerly used.

Refuse Removal: Refuse removal remained on a daily basis where possible throughout the year. Owing to breakdowns and loss of transport time due to this, the collection was at times irregular.

Mr. G. Barrow took over the work in this section after the death of Mr. L. Rene.

A total of 29,320 tons was collected during the year. This is an increase of about 4,000 tons or 10 tons per day.

All lorries in this section are very dilapidated, and required constant attention at the municipal garage ; 267 days were spent in garage during the year and it rarely happened that there was adequate transport available. Proper garage facilities are urgently needed if this service is to continue without serious dislocation in the future.

Refuse Disposal: The incinerator burned 15,314 tons of refuse, a daily average of 40.9 tons ; it was closed for repairs for a week in July.

Tips were used to dispose of 14,006 tons, and the filling of quarries will probably be completed in 1946.

The daily average of disposal was 80.3 tons, the previous year's average being 70.6 tons.

The erection of a pulveriser was started late in the year and should come into use early in 1946.

Street Cleansing : The work in this section increased as the Ziwani area was fully occupied and extra stone pitched drainage along roads increased.

2,125 gullies were cleansed, and 1,472 hours were spent clearing and flushing sewers. There were many stoppages due to water shortage, and constant flushing had to be resorted to in order to prevent this.

In addition to this work, exhausters cleared 987 conserving tanks, 307 septic tanks and 5,952 waste water pits. This is an increase of 213 conserving tanks, 21 septic tanks and 2,849 waste water pits. These increases give an indication of the amount of work now thrown upon these vehicles.

Brooms, even of the country type were in short supply and difficulty was experienced in keeping streets clean. An improved type of bass broom was supplied but is only suitable for hard surfaces and is no use on murram or earth.

Public Conveniences: The handing over of the location conveniences to the Superintendent of Native Locations reduced the size of this gang to 54 but the Sweeper Service again expanded to 269 premises. There were 42 cancellations during the year and 101 new accounts opened.

Labour: In November a new scale of wages was approved by the Public Health Committee and brought into force. This gave great satisfaction and produced a better temper amongst the labourers. It also caused the number of applications for work to increase, and in December there were some applicants who were refused work.

AUXILIARY HEALTH SERVICES

I. Lady Grigg African Maternity Hospital :

During the year the work of the hospital has been carried on under increasing difficulties owing to the inadequacy of the buildings. The most serious defects are, lack of an isolation ward for septic and infectious cases, lack of a kitchen, lack of proper accommodation for European staff, and insufficient and unsuitable lavatory arrangements.

As the number of patients increases, so do these serious shortages become aggravated, and they are a constant handicap to the nursing staff, who have been consequently unsettled and dissatisfied. It is essential that improvements should be made as soon as possible, and radical reconstruction and expension will have to be undertaken.

Ante Natal Clinic :

This is housed in a small building consisting of one room, beyond the theatre. There is just room for two examination couches side by side, and one small table between them. Admission of new

cases has to be done outside on the verandah. The taking of case histories and the actual examinations can be fairly adequately carried out here, but the numbers make it impossible to do any kind of investigation for V.D., which would seem to be increasingly necessary. Another room where girls could be trained to take smears and Kahns would be of very great help.

Concerning the Ante-natal work itself, there seems to be an idea prevalent among the women, that if they get an ante-natal card they have booked their beds, and do not yet seem to realise that the clinic is a necessary preliminary to a satisfactory labour. In consequence, they come first for examination when 8 to 8½ months pregnant, when it is too late to help them effectively should they be suffering from venereal disease, or some other intercurrent condition. This results in infected cases being delivered in a clean ward and afterwards being found to have definite venereal disease. There is very little time therefore and space is too cramped to give the mothers much general advice in the management of their pregnancies.

IN-PATIENT WORK :

The numbers have been steadily creeping up ever since a full time medical officer has been put in charge of the hospital. There are 27 beds available, and it is obviously impossible to deal adequately with over 100 births per month. In 1944 the lowest number treated in one month was 38, and the highest 112. In 1945, the lowest was 85, and the highest 150, and it appears that the number is keeping at the higher level. February, over a number of years has been the lowest and September the highest, whilst the proportion of abnormal cases is higher at the beginning of the year.

During the rush, it has only been possible to cope with the numbers by discharging cases the same, or the next day after delivery if this has been normal. This has been done where the patient gives an address in the location, and the Welfare Workers have endeavoured to help her at home. Unfortunately, this has many times been a temporary address only, and the woman has immediately returned to the reserve upon discharge. Cases have occasionally been reported or returned as septic after being discharged, but very many are lost sight of. We also have reason to believe that babies have died as a result of this early discharge.

During 1945 the number of cases arriving when far on in labour and exhausted, was distressingly high, but still showed a marked improvement upon the preceding year. It is now becoming unusual for a woman to refuse a Ceasarian Section when asked for permission to perform this operation ; indeed, women are coming in from the country asking that such should be done.

MUNICIPALITY OF NAIROBI

Kenya Colony.

With the Compliments

of

The Medical Officer of Health.

Public Health Department,
Town Hall,
Nairobi,
Kenya.

CORRIGENDA.

Page 7.	2nd. table: read European.
Page 19.	Table should be headed "Notifiable Infectious Diseases." Typhoid Fever figures should read:- 20, 16, 9, 9, 16, 7, 13, 13, 6, 7, 4, 5, 125. 2nd Paragraph:- for 310 read 272.
Page 20.	"Infectious Diseases Notified" table. Under "Malaria" insert "Grand Totals."
Page 22.	Last line. Read "sweetmeats."
Page 32.	3rd paragraph from foot of page to be deleted. 2nd paragraph from bottom of page, for "and" in first line, read "have." Insert "and" between "Kenya" and "Tanganyika."
Page 36.	II Aedes Mosquito Control (Yellow Fever) delete all words in first paragraph following "activities."
Page 37.	1st table, under 1945 read 0.08%.
Page 38.	Last line in table for "oil" read "old."
Page 51.	Penultimate paragraph, for "refusal" read "refuse."
Page 59.	Last line insert "a" between "started" and "series."
Page 60.	First paragraph - last line, for "permanet" read "permanent."

Abortions: These have been referred to the Native Civil Hospital as their number is high, and there is no possibility of dealing with them at the Municipal Hospital. This is unfortunate, as it leaves a big gap in the training of the midwives.

Overcrowding : The practice of the hospital of sending patients home too soon rather than overcrowd has been based on bitter experience of the increase of sepsis when the hospital is constantly full and patients are seeking admission too rapidly for adequate cleansing of the beds between cases. It has been the practice, when a number of rises in temperature is observed, to empty the ward of furniture, and cleanse it thoroughly. Whenever it has been possible to do so an immediate improvement has been observed.

During the latter part of 1945, there was a very grave increase in the number of cases of venereal disease, especially gonorrhoea ; this has materially added to the difficulties under which the work has been carried on, and has led to an appreciable increase in septic conditions.

Post Natal Clinic: This is held in the Ante Natal Clinic Room on Monday mornings. The women have not yet learnt to appreciate it, and attend badly. They have looked upon it as solely a hospital in which to have their children, and do not readily submit to an adequate examination afterwards. Reference to the numbers for 1945 will show how little the women avail themselves of it. It would appear to be advisable to undertake propaganda work on this subject among the Africans outside the hospital, so that they or their husbands may be made to understand the purpose of this clinic.

TRAINING OF MIDWIVES.

It is at present possible to house 20 trainees, and it is hoped to increase this number to 30 when additional accommodation is available. Training takes the form of ward work under the supervision of the nursing sisters, and lectures on nursing and midwifery which are given by the matron, and the medical superintendent respectively.

Trainees study elementary anatomy, and practical housework during their first 3 months, later proceeding to study practical nursing, ward work, and lectures during the remainder of their first year. During the second year they are taught diagnosis, and the technique of delivery. At the termination of the 24 months required by Government, a pupil midwife should be able to detect probable difficult labour in the clinic, should know thoroughly the technique of labour, be able to assist at Caesarean operations, and be thoroughly conversant with all obstetric theatre procedure. She should know how to sterilize her equipment, and should be able to conduct a nursery efficiently.

During December 1945, 5 candidates took the examination and obtained their certificates. They were posted to Government hospitals at Machakos, Kiambu, Fort Hall, Malakisi, and Nyeri.

Trainees are mostly proposed by hospitals, to which they return on receiving their certificate ; this year many have been admitted from schools.

EUROPEAN STAFF

This consisted during the year of a medical superintendent, a matron, and 2 nursing sisters ; from February until July the matron conducted the work single handed, with occasional help from volunteers, and with daily assistance from the health visitors kindly lent by the Child Welfare Department, during April and May.

Two sisters were appointed from England during the year. It was decided, however, that it was impossible to give adequate supervision, with nursing sisters on 24 hourly call, and the staff was later increased by one nursing sister to allow for regular night duty.

The difficulties which remained at the end of the year came largely from the cramped quarters provided for the European staff.

ANALYTICAL TABLES:

Cases Admitted during the year:—	Resident	Non-Resident	Total:
	974	817	1791

Discharged during the year:	1777
No. of beds	27
Patients' days	7471
Average stay	3.21 days.
Baby days	5762
Motherless baby days	399

ADMISSIONS BY TRIBES:

	From Clinics	Admitted Direct	Total.
Kikuyu	849	399	1248
Jaluo	219	97	316
Other Tribes	161	66	227
Total:	1229	562	1791

BIRTHS:

No. of Births	1041	418	1459
Still-Births	35	48	83
Born before arrival	23	23	46
Twins	14	11	25
Total:	1113	500	1613

ANTE NATAL CLINIC:

No. held during the year	239

	Resident	Non-Resident	Total:
New Cases	1288	1248	2536
Old Cases	1264	922	2186
Grand Total:	1552	2170	4722

POST NATAL CLINIC:

No. of clinics held	50

New Cases	130	76	206
Old Cases	8	—	8
Grand Total:	138	76	214

MATERNAL DEATHS:

	From Clinics	Admitted Direct	Total:
Ruptured Uterus	—	1	1
Peritonitis	—	1	1
Septicaemia	2	—	2
Pneumonia	—	1	1
Obstetric Shock	1	—	1
Ante-Partum Haemorrhage	—	1	1
Embolism	1	—	1
Ectopic Gestation	1	—	1
Total:	5	4	9

CAUSES OF INFANT DEATHS:

	From Clinics	Admitted Direct	Total:
Asphyxia	—	1	1
Birth Injuries	—	7	7
Cerebral Haemorrhage	4	1	5
Congenital Haemorrhagic Disease	2	—	2
Congenital Malformations	—	1	1
Congenital Syphilis	12	5	17
Gangrene of feet	1	—	1
Maternal Malnutrition	1	2	3
Pneumonia	1	1	2
Prematurity	11	11	22
Septicaemia	1	—	1
Toxaemia	2	—	2
Total:	35	29	64

CAUSES OF STILL-BIRTHS:

Births	From Clinics	Admitted Direct	Total:
Accidental Haemorrhage	—	2	2
Anencephaly	1	—	1
Asphyxia	2	2	4
Birth Injuries	11	11	22
Born Before Arrival	1	1	2
Delayed Breech	1	—	1
Hydrocepalus	—	2	2
Macerated Foetus	5	6	11
Intrauterine Death	—	1	1
Maternal Malnutrition	2	—	2
Obstructed Labour	2	7	9
Prematurity	—	6	6
Premature Rupture of Membranes	—	1	1
Prolapsed Cord	6	4	10
Syphilis	3	5	8
Toxaemia	1	—	1
Total:	35	48	83

OPERATIONS:

	From Clinics	Admitted Direct	Total:
Caesarean Section	33	10	43
Curettage	3	7	10
Craniotomy	6	9	15
Decapitation	1	—	1
Examination under anaesthetic	4	—	4
Extended Breech	1	1	2
Forceps Extraction	45	25	70
Hysterectomy	—	1	1
Induction of Labour	3	2	5
Manual Removal of Placenta	4	3	7
Perineal Repair (Major)	10	5	15
Repair of Ruptured Uterus	—	1	1
Replacement of Cord	—	1	1
Internal Version	3	4	7
Total:	113	69	182

By Midwives:

Episiotomies made and stitched	234
Perineal Tears stitched	85
Total:	319

CHILD WELFARE

Staff.

Dr. Edith N. Hartley, M.B., Ch.B. (Edin) D.P.H. (Edin), continued in charge of the Department throughout the year.

Dr Louise Hunter, M.O. i/c Venereal Diseases, as well as her usual duties, undertook some sessions at two of the Welfare Centres, concentrating more on the Venereal Diseases aspect of the work. This assistance had to cease at the end of June, due to an increase of work in her own Department, and Dr. Hartley had to carry the whole burden of the work, for the remaining six months of the year.

The Council sanctioned the creation of the post of Supervisor of Health Visitors and Midwives, and Mrs. Dugmore was appointed. This has proved to be one of the wisest appointments ever made by Council. Mrs. Dugmore has accomplished a great amount of work during the year, co-ordinating the groundwork of the Department, obtaining similarity in methods of furniture and equipment of the seven Welfare Centres, doing holiday relief duty for the Health Visitors, and directing the work of the temporary incumbents, of which there have been a number. This has prevented to a great extent, loss of continuity in the work. She has started series of

simple lectures to the ayahs attached to the Welfare Centres, in an effort to increase their interest in their work, and improve the standard of it, and has had the general supervision of them also. The great value of this work will be felt more and more in greater efficiency and will be indispensable, with the expansion of the Department, and when the temporary appointments are gradually replaced by permanet staff.

There are three permanent appointments among the Health Visitors. Miss Smith, Mrs. Gibb and Miss Benjamin. There are four temporary appointments.

The time has come when no more temporary appointments should be contemplated. Every endeavour should be made to secure a permanent staff. The Department has managed during the war years to "carry-on" with frequent changes but this has not been conducive to a continuity of confidence by the Mothers in their Location Health Visitor. Time is needed for mutual knowledge to grow and so enable the Health Visitor to influence the Mothers in their homes, on habits, cleanliness, and diet.

Miss Ghodke arrived from India during the year and was appointed to the Railway Asian Welfare Centre in Sandiford Road in September.

The Staff have worked conscientiously, and with loyal co-operation in any extra duties demanded of them. At the beginning of the year the Health Visitors were asked to do relief duties at Pumwani Maternity Hospital, due, to shortage of staff there. They are required to assist at the Town Hall with Yellow Fever Inoculations. All this has curtailed the time available for "Home Visiting" which is regrettable as Home Visiting is the fundamental requirement for the success of Child Welfare work. With increasing attendances at the Welfare Centres, individual and group talks to Mothers, and Sewing Classes, more time is spent at the Centres, and any further curtailment of Home Visiting is detrimental.

WELFARE CENTRES:

There has been no improvement in the buildings during the year. Pumwani Welfare work is carried on in a converted native house.

Ngara Road Asian Centre is very small and quite inadequate for the work to be done there.

With the gradual erection of houses at Makongeni "B" Location, and the transference of families from Shauri Moyo, the Welfare work was transferred to a converted house, until such time as the proposed Welfare Centre is built. The Shauri Moyo Centre, housed in a converted shop, was handed over to Government for a dispensary, which commenced functioning in July.

This centrally placed dispensary has proved of great assistance to the Welfare work, as cases are treated there instead of taking up the time of Health Visitors, which can be more usefully devoted to additional preventive work.

The Railway Authorities have made improvements to their Welfare Centres at Railway Landies and Makongeni. For their Asian employees, in Sandiford Road, they have converted admirably a building which they have equipped in a most satisfactory fashion.

WORK :

The Infant Mortality Rate has continued its steady downward trend, which is THE criterion of the success or otherwise of Child Welfare work.

With the gradual increase in intelligent co-operation of the mothers, it has been possible to persuade many households to use Soya Beans or Soya Bean Flour, rich in the proteins, so lacking in an almost exclusively maize meal diet. This should gradually have a beneficial effect on Pellagra, which is so prevalent. The Health Visitors are trying to persuade the Mothers to mix it with the children's " uji " or make an " uji " of Soya Flour only. It is hoped that in time its increasing use may prevent the development of nutritional diseases in the small children, when combined with the efforts being made to add eggs to the toddlers' diet.

There is also an improvement in the way the Mothers are clothing their small children, which is due to the persistent persuasion of the Health Visitors, whose up-hill task it is to induce the Mothers to sew and knit when materials are both scarce and expensive.

Looking back over 9 years of work, watching the steady growth of the location in which, (in spite of improved, and increased housing available), overcrowding is still seen to be a problem, as there seems to be no diminution of the influx to the Locations. Many come in from the Reserves only when their children are ailing, to attend the Welfare Centres and stay comparatively short periods. It is borne in upon one that the advantages available in the locations should also be obtainable in the larger villages. This view is expressed so well by P. Granville Edge, in his book "Vital Statistics and Public Health work in the Tropics ":

" Where apparently increasing birth rates are observed and increasing demands are being made upon existing ante-natal clinics, welfare centres and Maternity accommodation, the responsible authorities may be erroneously persuaded to embark upon expensive development schemes and building programmes in such areas, the actual need for provision of such facilities may lie in the neighbourhood of the remoter rural areas."

It is realized that this is not within the Council's control but it could bring its influence to bear in persuading Government of the necessity for the provision of Ante-natal and Child Welfare facilities in the Reserves, to relieve the Council of the apparently never-ending provision of more and more Welfare Centres and staff, whilst there are other great needs awaiting attention, one being the provision of nursery schools to work in co-operation with the Child Welfare Centres.

As the children leave the care, (from the health point of view), of the Health Visitor, at the age of 5 years, there is a period when they play in the streets, without discipline or supervision of their health, as they are not admitted to the schools until 6 or 7 years of age. These are impressionable years when discipline and direction could commence with great advantage, and their health remain under care.. *After admission to the schools they should be under the care of a School Medical Officer.*

The work of the Department has continued along the same lines as during the previous years, gradually expanding wherever possible, depending on circumstances of staff, co-operation of Mothers, and materials available.

REVIEW OF ACTIVITIES :

Home Visiting: The great importance of this aspect of their work has been kept constantly in the minds of the Health Visitors, as their influence is so much more effective with the individual mother in her own home, than when advice is given at the Welfare Centres to groups. The Health Visitors on the whole have been very conscientions in their visiting.

Ante-natal clinics have been held at all Centres except Pumwani and Kariakor, as the Mothers in these Locations can easily attend the Maternity Hospital clinic, and Medical staff has not been available to hold sessions at all the Centres ; It is however intended, when Medical Officers are available, that Ante-natal clinics should be held at these two Centres because of the better supervision that can be undertaken of the mothers, by the Health Visitors, and the " follow-up " of the babies.

The Ante-natal clinics at the Indian Centre, Ngara Road, have grown so large that it is impossible to give as much individual attention as is desirable. The situation will be eased when more Centres are built. Most excellent co-operation has grown up between the Centre and the Medical Practitioners, the certificated Midwives, and the practising dais, all to the advantage of the Mothers. Interesting statistics have been drawn up by the Health Visitor showing the greater prevalence of anaémia among the vegetarian members of the community.

Post-natal Examinations are carried out on all Mothers who are willing. Among the African women there is a prejudice against this to be overcome, and this may take time to dispel.

Child Welfare Clinics. The result of this work is seen in the satisfactory fall in the Infant Mortality Rate, and the gradually improving standard of health among Infants and Toddlers shown by less sickness among the children.

Courses of Instruction: The Health Visitors have given talks to the Mothers on breast feeding, bathing of infants, cleanliness, clothing and diet. Food demonstrations have been given, sewing and knitting classes have been held, and in spite of the shortage and expense of the various items the Health Visitors have obtained most commendable results.

An exhibition of knitting done by Mothers and members of their Club was held at the Indian Centre, Ngara Road, towards the end of the year and some very beautiful work was on view. The Health Visitor combined it with demonstrations.

Milk: As in previous years milk has been given free to undernourished and necessitous children and a few Mothers also have been encouraged to drink some. The Health Visitors have found it helpful in assisting the Mothers in the weaning of their babies.

Mothers' Club: A Mother's Club was started by the Health Visitors of the Ngara Road Welfare Centre which has proved of inestimable value in gaining greater co-operation from the Mothers and enabling the Health Visitor to influence the Mothers from an additional friendly angle. Through this Club a Children's Club has been formed which is proving most advantageous to the Toddlers, both mentally and physically. Lack of space both in the grounds and in the Welfare Centre itself is a great handicap to further expansion.

Through the influence and encouragement of the Sandiford Road Health Visitor, who has so recently commenced work in that district, a *Mothers' Association* has been formed which gives great promise of improving the social amenities of the women and enabling them collectively to do a great deal for their children.

MEDICAL ASPECTS:

There have been no serious large scale epidemics among the children during the year, and on the whole, there has not been much sickness among them. There have been some cases of pneumonia, malaria, diarrhoea, measles and chickenpox. During November and December inflamed throats have been prevalent among both Asian and African children.

VACCINATIONS:

Vaccinations have been carried out at the Welfare Centres on all children soon after they come under the care of the Health Visitor.

The following are the numbers of vaccinations given at each Centre:—

Pumwani 218; Kariakor 395; Makongeni "B." 180; Ngara Road 45; Railway Landies 323; Makongeni "A." 135 and Sandiford Road Nil.

Kahn Tests were carried out on the Mothers attending the Antenatal clinics, and it is very satisfactory to find the small proportion of positive results among these family units:

Railway Landies	219	with 26	positives
Makongeni "B."	56	„ 5	„
Makongeni "A."	113	„ 17	„

At the Indian Welfare Centres, cases for the test are sent to their family doctor.

Ngara Road	55 were sent for test	3 positive
		36 negative
		16 unknown result

Sandiford Road 7 were sent—result unknown.

REQUIREMENTS OF THE DEPARTMENT:

Welfare Centres designed with accommodation suitable for the work that has to be done, being adequate in size without being elaborate, at Pumwani, Ngara Road, River Road and Makongeni "B."

Equipment: New equipment, (unobtainable during the war years) for the more recently opened Centres and to replace the worn out equipment of the long established Centres.

Medical Staff: Full time European Assistant for part of the African section of the work, and to undertake the Asian Section until such time as the expansion of the Asian side justifies an Asian Medical Officer.

ATTENDANCES AT CLINICS & HOME VISITS.

	Pum-wani:	Karia-kor:	Rly. Landies:	Makon-geni B':	Makon-geni'A':	Ngara Rd:	Sandi-ford Rd:	1945	1944	1943	1942
							(3 mths.)			(plus Pu.	Hosp.)
ANTE NATAL:											
Total attendances ...	—	—	1,058	244	1,265	3,147	102	5,816	5,917	7,928	9,262
New cases	—	—	245	72	219	809	30	1,375	1,139	—	—
Confined at home ...	40	30	123	13	131	255	12	604	—	—	—
CHILD WELFARE:											
Total Attendances											
0-5-yrs. ...	11,501	9,968	7,147	4,302	6,600	5,190	810	45,518	44,951	35,507	42,411
Infants new, 0-1-yr.	251	374	246	137	218	502	84	1,812	—	—	—
Toddlers new, 1-5-yrs.	193	555	300	132	173	234	168	1,755	—	—	—
HOME VISITS:											
By H. Visitors ...	1,111	1,495	1,278	1,459	1,269	2,118	537	*9,267	11,987	—	—
By Asst. Staff ...	1,008	2,498	2,470	2,281	1,883	1,624	251	12,015	11,422	—	—
								21,282	23,409	28,762	24,943
DISPENSARY:											
Total attendances ...	1,583	2,962	1,239	362	856	738	154	†7,894	24,170	23,137	24,484

*Health Visitors did relief duty at Pumwani Hospital early in the year, and are required to help with Yellow Fever Inoculations at the Town Hall.

†Government Dispensary opened in Shauri Moyo in July.

VENEREAL DISEASES

(1) ATTENDANCES:

Number of consultations			10,505
Number of treatments			10,549
Attendance at gynaecological clinic			350
Total attendances			21,449
Number of morning sessions	248	Average per session	42.3
Number of afternoon sessions	248	Average per session	42.5
Number of gynaecological sessions	47	Average per session	7.4

(2) CONSULTATIONS:

Total number of consultations			10,505
Number (V.D. patients)	7,700	10,505	
Number by other patients	2,805		
Consultations (V.D. patients)			7,700
By patients with syphilis	5,842		
By patients with gonorrhoea	502	7,700	
By patients with SY and GC	716		
By patients with Yaws	640		

(3) CASES:

Number of new cases 1945				1,736
Number of old cases 1944	206	Total:		238
„ „ „ „ 1943	28			
„ „ „ „ 1942	4			
Total number of cases who attended in 1945 (new and old)				1,974
Number of cases of V.D. New	720	887		
do do Old	167			
Number of other cases New	1,016	1,087	.....	1,974
do do Old	71			

(4) INJECTIONS GIVEN:

Intravenous	3,280	Total	7,268
Intramuscular	3,988		

	New Cases	Old Cases	Total
(5) TYPE OF DISEASE:			
Secondary syphilis	76	24	100
Latent syphilis	290	96	386
Tertiary syphilis	9	3	12
Syphilis of Central Nervous System	—	1	1
Congenital syphilis	86	17	103
Total syphilis	461	141	602
Gonorrhoea	165	16	181
Soft sore	—	1	1
Yaws	94	9	103
Total V.D.	720	167	887
Other cases	1016	71	1087
Total cases	1736	238	1974

(6) Specimens Taken for Laboratory Tests:

Number of specimens for Kahn reaction			2,443
Number giving Positive reaction	687		
Number giving Doubtful reaction	129		2,443
Number giving Negative reaction	1,627		
Number of IDE reactions tested in clinic			1,582
Number giving Positive reaction	381		
Number giving Doubtful reaction	79		1,582
Number giving Negative reaction	1,123		
Number of smears sent for examination for Gonococcus			3,272
From Urethra	1,619	Positive	46
From Cervix	1,571	Positive	102
From Vagina	26	Positive	10
From Batholin Glands	3	Positive	2
From Eye	53	Positive	7
Total Examined	3,272	Total Positive	167

(7) Home Visits:

Number of home visits paid		1,531
Visits to V.D. patients	1,110	
		1,531
Visits to other patients	421	

1,110 visits were paid to 438 V.D. patients.

Patients were seen on 550 visits; and were not seen on 560 visits, making 49% of visits on which contact was made with the patient.

When contact was made, the patient returned to the clinic in 474 cases, making a return rate of 87%.

(8) Examination of Women Prisoners from Jail:

Number examined		42
Number with V.D.		18
Percentage infected		43%
Number with V.D.		18
With syphilis only	10	
With Gonorrhoea only	3	18
With SY and GC	5	

(9) Examination of Husbands & Wives of Patients with V.D.:

Husbands referred to I.D.H. from V.D.C.			144
Number who attended			42
Number who were syphilis contacts	35	Number positive	22
Number who were gonorrhoea contacts	7	Number positive	none, but all had signs of old infection.
Wives referred to V.D.C. from I.D.H.			22
Number who attended			3
Number who were syphilis contacts	1	Number positive	none
Number who were gonorrhoea contacts	2	Number positive	none

(10) Examination of Ayahs Referred by Employers:

Number examined		54
Number with V.D.		27
Percentage infected		50%
With syphilis only	23)	
With Gonorrhoea only	1)	27
With SY and GC	3)	

Comparison of Figures for Past Four Years:

	1942	1943	1944	1945
Consultations	7,599	8,720	8,320	10,505
Treatments	4,600	6,523	7,421	10,549
Total attendance	12,199	15,243	15,741	21,054
Consultations by V.D. patients	5,226	6,434	6,208	7,700
By patients with SY	3,756	5,168	5,309	5,842
By patients with GC	516	963	435	502
By patients with SY & GC	—	—	—	716
By patients with Yaws	954	303	464	640
Total cases (new & old)	1,010	1,255	1,530	1,974
Cases with SY	393	435	475	602
Cases with soft sore	—	—	1	1
Cases with G.C.	89	82	56	181
Cases with Yaws	125	108	97	103
Total with V.D.	609	625	629	887
Injections given	4,710	5,858	6,109	7,268

Observations:

In view of the high number of infections found in the ayahs examined (50%) it is regrettable that the examination of every ayah is not insisted upon by all prospective employers. In 1944, 60 ayahs were examined and 41% of them were found to be infected. These discoveries have made ayahs either reluctant to be examined, or to refuse to have an examination. If all employers were to insist upon an examination, no ayah could obtain employment without a certificate of freedom from infection.

The examination of husbands and wives of patients with V.D. has not developed satisfactorily. Very few husbands are told to send their wives to the V.D.C. (only 22 in a whole year and of these only about 14% attended. Of the 144 wives who were told to send their husbands for examination to the I.DH., 29% attended.

All women prisoners have been examined and reported upon, for whom an examination was asked for.

PERSONNEL

MEDICAL OFFICER OF HEALTH:
H. W. Tilling, M.R.C.S. (Eng.) L.R.C.P. (Lond.) D.P.H. (Lond.)

ASSISTANT MEDICAL OFFICER:
H. A. Crouch, O.B.E., M.C. (resigned February, 1945).

MEDICAL OFFICER I/C CHILD WELFARE:
E. N. Hartley, M.B., Ch.B. (Edin.) D.P.H. (Edin.)

MEDICAL OFFICER I/C VENEREAL DISEASES:
L. O. Hunter, M.R.C.S. (Eng.), L.R.C.P. (Lond.)

SENIOR SANITARY INSPECTOR:
Mr. R. C. Forster, Cert. R.S.I. and Meat.

SANITARY INSPECTORS:

Mr. D. Mackintosh,	Cert. S.A.S.
Mr. S. White	Cert. R.S.I.
Mr P. Cairns	Cert. R.S.I.
Mr. A. Ramshaw	Cert. R.S.I. & Meat.
Mr. A. Thompson	Cert. R.S.I. & Meat A.M.I.S.E.
Mr D. Belsare	Cert. R.S.I. (India).

Five African Health Assistants.

INSPECTOR FOODS:
Mr. A. A. Watts — Cert R.S.I. & Meat.

ANTI MALARIAL OFFICER:
Mr. G. R. C. van Someren.

MOSQUITO OVERSEERS:
Mr. F. S. Cowburn.
Mr. D. C. Klynsmith.
Mr. Abdul Karmali.

RAT CONTROL OVERSEER:
Mr. J. Mathews.

SUPERVISOR OF HEALTH VISITORS:
Mrs. E. T. Dugmore.

HEALTH VISITORS:

Miss J. Smith.	
Mrs. A. Gibb.	
Mrs. M. Humphreys.	
Mrs. M. Schermbrucker.	
Mrs. Branston	(resigned March).
Mrs. U. Pickwell	(resigned September).
Mrs. Langham-Hobart	(resigned November).
Mrs. S. Bate.	(from August to November).
Mrs. Brooks	(from March to December).
Mrs. C. M. Davis	(from December).
Miss P. Benjamin.	
Miss Godke	(from April to December).
Miss Jena Sidi Mohamed	(from May to December).
Mrs. S. Chaddha	(from December).

PUMWANI AFRICAN MATERNITY HOSPITAL:

M.O. i/c Hospital:
M. A. Williams.

Nursing Sisters:
Mrs. E. A. M. Tucker.
Miss A. Taylor (resigned in May).
Mrs. M. Winston (from June to August).
Miss E. Dodwell (from July to December).
Miss M. Francis (from July to December).
Miss J. Lorimer (from November to December).

Housekeeper:
Miss W. Foy (from October to December).

Linen & Store:
Mrs. Denousse (from April to December).

CONSERVANCY:

Superintendent:
R. A. MacDonell.

Assistant Superintendent:
T. E. Davis (from June to December).
H. E. Sparke (resigned in October).

Refuse Removal Overseer:
L. E. René (Died November).
G. Barrow (from September to December).

Street Cleansing Overseer:
D. D. Luies

Assistant Cleansing Overseers:
J. H. D. Luies.
J. E. Botha.

Conservancy Overseers:
F. Vel.
T. H. Pienaar.

Sweeper Service Overseer:
W. F. Viljoen (from July to December).

Clerks:
Miss W. W. Harris.
Mrs. J. Shepherd.

EXPENDITURE:

	£.	s.	cts	£.	s.	cts.
Salaries: M. O.H.	1,300	0	00			
Asst. M. O.	533	6	68			
Sanitary Inspectors	4,807	19	80	6,641	6	48
Cost of living allowances	518	6	21			
Provident Fund	487	4	19			
Clerks' Salaries	520	0	00			
Rent of Offices	500	0	00			
African Sanitary Inspectors' Salaries ...	446	1	64			
Printing, Stationery & Telephones ...	497	14	83			
Native Messengers	161	16	02			
Locomotion Allowances	373	17	51			
Passage Expenses—S.I'.	339	17	75			
Local Leave Expenses	96	10	15			
Uniforms and Miscellaneous	61	15	14			
Food and Drugs Inspection	117	10	54	10,762	0	46
MOSQUITO CONTROL:						
Salaries: Senior Mosquito Officer ...	540	0	00			
Overseers	960	0	00			
Cost of Living Allowances	346	7	36			
Provident Fund	79	10	00			
Native Wages	2,818	9	99			
Oil and General Stores	798	19	16			
Transport	305	19	86			
Uniforms	122	5	39			
Telephone and Miscellaneous	27	18	64	5,999	10	40
VERMIN CONTROL:						
Salary—Overseer	380	0	00			
Cost of Living Allowance	116	13	40			
Provident Fund	28	10	00			
Native Wages	463	14	67			
Stores and Equipment	115	16	69			
Transport	150	19	57	1,255	14	33
AUXILIARY HEALTH SERVICES:						
Salaries—Lady Medical Officers ...	1,530	0	00			
Health Visitors	3,429	18	29			
Cost of Living Allowances	451	18	63			
Provident Fund	283	14	07			
Locomotion Allowances	225	1	60			
Wages of Native Ayahs & Dressers ...	586	14	99			
Maintenance of Clinics	418	8	38			
Medical Stores and Infant Foods ...	939	18	54			
Uniforms and Equipment	201	15	96			
Telephones, Printing & Stationery ...	37	10	02			
Rent of Clinic	35	0	00			
Leave Expenses	45	1	40	8,185	1	88
Total:				26,202	7	07

	£.	s.	cts.	£.	s.	cts.
				26,202	7	07
LADY GRIGG MATERNITY HOSPITAL:						
Salaries—Lady Superintendent						
Matron	400	0	00			
Nursing Sisters	949	7	58			
African Nursing Staff	486	12	78			
Cost of Living Allowances	43	6	64			
Provident Fund	82	2	39			
Locomotion Allowance	57	1	00			
Air Passages from U.K. (3)	510	0	00			
Native Wages—Household Staff	165	14	08			
Medical Stores and Equipment	427	19	32			
Linen and Uniforms	219	17	23			
Maintenance of Buildings & Furniture	252	7	63			
Medical Fees	56	8	00			
Telephone and Stationery	57	12	04			
Travelling Expenses—Native Staff ...	76	19	70			
Light Fuel and Water	167	7	77			
Provisions	68	1	99			
Renewals Reserve	92	10	00			
IMPROVEMENTS:						
Hot Water System	274	0	00			
Fencing and Huts	386	0	00			
Lecture Room, etc.	400	2	53	5,916	5	68
INFECTIOUS DISEASES:						
Hospital Fees	1,290	0	00			
Notification Fees	63	11	00	1,353	11	00
				33,472	3	75
REVENUE:						
Government Grant	19,000	0	00			
Sundry Receipts	173	13	05			
Auxiliary Health Services	33	14	14			
Sundry Revenue						
Lady Grigg—Fees and Grants	1,102	9	95	20,309	17	14
				£13,162	6	61